

# UNIVERSITY OF ARKANSAS BULLETIN

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Number 4

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## Annual Catalog

### 1919 - 1920



## ANNOUNCEMENT

1920 - 1921

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# UNIVERSITY CALENDAR

1920-1921

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## 1920.

September 20 - 21, Monday-Tuesday	Special, make-up and entrance examinations
September 22-25, Wednesday-Saturday	Registration for fall term
September 27, Monday	Fall term begins, 8:00 a. m.
November 25, Thursday.	Thanksgiving holiday
December 16-22, Thursday-Wednesday	Registration for winter term
December 22, Wednesday	Fall term ends, 5:00 p. m.

## 1921.

January 4, Tuesday	Winter term begins, 8:00 a. m.
March 14-19, Monday-Saturday	Registration for spring term
March 19, Saturday	Winter term ends, 5:00 p. m.
March 21, Monday	Spring term begins, 8:00 a. m.
March 24, Thursday	Easter vacation begins, 5 p. m.
March 29, Tuesday	Easter vacation ends, 8 a. m.
June 11, Saturday	Spring term ends, 5:00 p. m.
June 12, Sunday	Baccalaureate sermon
June 14, Tuesday	Commencement day
June 15-18, Wednesday-Saturday	Registration for summer term
June 20, Monday	Summer term begins, 8 a. m.

## BOARD OF TRUSTEES

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*The Governor of Arkansas*-----*Ex-Officio*

CHARLES H. BROUGH, Little Rock.

*The State Superintendent of Public Instruction*-----*Ex-Officio*

JOHN L. BOND, Little Rock

*Expiration of Term*

JAMES K. BROWNING, Piggott-----1921

Z. LYTTON REAGAN, Rogers-----1921

A. B. BANKS, Fordyce-----1923

FRANK PACE, Little Rock-----1923

JAMES D. HEAD, Texarkana-----1925

JOE K. MAHONY, El Dorado-----1925

HARRY L. PONDER, Walnut Ridge-----1925

## OFFICERS

Chairman-----GOVERNOR CHARLES H. BROUGH

Secretary and Auditor-----WILLIAM H. CRAVENS, Fayetteville

## COMMITTEES

*Executive Committee*—Governor Brough, Chairman; Messrs. Mahony, Head and Reagan.

*Finance Committee*—Mr. Banks, Chairman; Messrs. Head and Reagan.

*Teachers' Committee*—Mr. Bond, Chairman; Messrs. Mahony and Head.

*College of Agriculture*—Mr. Browning, Chairman; Messrs. Ponder and Pace.

*Buildings and Grounds*—Mr. Reagan, Chairman; Messrs. Ponder and Browning.

*Branch Normal School*—Mr. Bond, Chairman; Messrs. Banks and Mahony.

*Medical College*—Mr. Pace, Chairman; Messrs. Bond and Head.

*Board of Control of the Agricultural Experiment Station*—The Committee on the College of Agriculture, the President of the University, and the Director of the Experiment Station.

*Committee on Agricultural Extension*—Mr. Browning, Chairman; Messrs. Pace and Banks.

## OFFICERS OF ADMINISTRATION

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Note.—The first date after a title indicates the year of appointment to present rank; the second, the year of first appointment to any position in the University. Where they coincide, only one date is given.

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JOHN CLINTON FUTRALL, B. A., (University of Virginia), M. A.  
(University of Virginia).  
*President*, 1913, 1894

WILLIAM NATHAN GLADSON, B. M. E., (Iowa State College),  
E. E. (Iowa State College), Ph. D. (McLemorsville College).  
*Vice-President and Dean of the College of Engineering*,  
1914, 1894.

GEORGE WESLEY DROKE, B. A. (University of Arkansas), M. A.  
(University of Arkansas), LL. D. (Hendrix College).  
*Dean of the College of Arts and Sciences*, 1915, 1880.

JAMES RALPH JEWELL, B. A. (Coe College), M. A. (Coe College),  
Ph. D. (Clark University).  
*Dean of the College of Education*, 1913

BRADFORD KNAPP, B. S. (Vanderbilt University), LL. B. (University of Michigan), D. Agr. (Maryland Agricultural College).  
*Dean of the College of Agriculture and Director of the Agricultural Experiment Station*, 1920.

MARTIN NELSON, B. S. A. (University of Wisconsin), M. S. (University of Wisconsin).  
*Vice-Dean of the College of Agriculture and Vice-Director of the Agricultural Experiment Station*, 1920, 1908.

ARTHUR MCCracken HARDING, B. A. (University of Arkansas),  
M. A. (University of Chicago), Ph. D. (University of Chicago).  
*Director General Extension Division*, 1919, 1905.

PEARL MARION FEARS,  
*Acting Registrar*, 1919, 1918.

JOHN CLARK JORDAN, B. A. (Knox College), M. A. (Columbia University), Ph. D. (Columbia University).  
*Examiner*, 1919, 1918.



WILLIAM HAMPTON CRAVENS,

*Auditor and Secretary to the Board of Trustees, 1911.*

WILLIAM CASPER LASSETTER, B. S. A. (University of Wisconsin),

*Director Agricultural Extension Division, 1916, 1910.*

JULIA RAMSEY VAULX, B. A. (University of Arkansas), M. A.  
(Cornell University).

*Librarian, 1914.*

MARY ANN DAVIS,

*Dean of Women, 1911.*

JAMES BLODGETT CRAIG, B. A. (University of Michigan),

*Director of Athletics, 1919.*

PRUDENCE RILEY, R. N.

*Superintendent of the Infirmary, 1920.*

FREDERICK GOTTLIEB BAENDER, B. M. E. (Iowa State University),  
M. M. E. (Cornell University).

*Superintendent of Mechanic Arts, 1916.*

NOAH FIELDS DRAKE, C. E. (University of Arkansas), B. A.  
(Leland Stanford, Jr., University), M. A. (Leland Stanford,  
Jr., University), Ph. D. (Leland Stanford, Jr., University).

*Curator of the Museum, 1912.*

BOLLING JAMES DUNN, B. A. (Bethel College), M. A. (Bethel  
College).

*Assistant Librarian, 1917, 1894.*

JIM P. MATHEWS, B. A. (University of Arkansas).

*Assistant Librarian, 1917.*

INA HELEN KNERR, B. A. (University of Iowa).

*Assistant Librarian, 1919.*

ETHA GRACE JOHNSON,

*Secretary to the President, 1918.*

FANNIE S. PARK,

*Superintendent of Carnall Hall, 1907.*

MRS. CHARLES WINKELMAN,

*Superintendent of the Men's Dormitories, 1919.*

JANE KENNEDY DICKEY, B. A. (University of Kentucky).

*Secretary of the Young Women's Christian Association,  
1917*

WILLIAM S. GREGSON,

*Y. M. C. A. Secretary, 1919.*

## FACULTY

Note.—The first date after a title indicates the year of appointment to present rank; the second, the year of first appointment to any position in the University. Where they coincide, only one date is given.

FREDERICK HENRY HERBERT ADLER, B. A. (Ohio State University),  
M. A. (University of Illinois), Ph. D. (University of Illinois).

*Professor of German and Head of Department of German,*  
1919.

†RUSSELL HAYDEN AUSTIN, B. S. A. (University of Arkansas).  
*Instructor in Agronomy,* 1918.

FREDERICK GOTTLIEB BAENDER, B. M. E. (University of Iowa), M.  
M. E. (Cornell University).

*Professor of Heat Power Engineering and Head of Department of Heat Power Engineering,* 1916.

WILLIAM J. BAERG, B. A. (University of Kansas).  
*Assistant Professor of Entomology and Acting Head of Department of Entomology,* 1918.

MARY CUMMINGS BATEMAN,  
*Instructor in Voice,* 1905.

MABEL CLAIRE BELL,  
*Assistant in Piano,* 1909.

OSWALD BLACKWOOD, B. A. (Boston University).  
*Assistant Professor of Physics,* 1919.

WILLIAM LESLIE BLEECKER, D. V. M. (Ohio State University).  
*Assistant Professor of Bacteriology and Pathology and Head of Department of Bacteriology and Pathology,* 1918.

BERTHA ELLIS BOOTH, B. A. (Drury College), M. A. (Drury College and University of Missouri), Ph. D. (University of Chicago).  
*Instructor in Education,* 1919.

†Member of Experiment Station Staff.

JOHN THEODORE BUCHHOLZ, B. S. (Iowa Wesleyan College,) B. A. (University of Iowa), M. S. (University of Chicago), Ph. D. (University of Chicago).

*Professor and Head of Department of Botany, 1919.*

JOHN PRESTON BUCK, B. A. (Baylor University), B. S. Ag. Ed. (Texas A. & M. College).

*Professor of Agricultural Education, 1920.*

NELS ANDREW NELSON CLEVEN, Ph. B. (University of Chicago), Ed. B., (University of Chicago), Ph. D. (University of Munich).

*Assistant Professor of History and Political Science, 1919.*

†JOHN RALPH COOPER, B. S. (Kansas State Agricultural College), M. S. (University of Nebraska).

*Professor of Horticulture and Head of Department of Horticulture, 1918.*

RUTH MARY COWAN, B. S. (University of Chicago).

*Assistant Professor of Home Economics Education, 1918.*

WILLIE VANDEVENTER CROCKETT,

*Instructor in Expression, 1905.*

MARY ANN DAVIS,

*Instructor in English, 1915.*

JAMES DINWIDDIE,

*Instructor in Shopwork and Foreman of the Shops, 1916.*

\*NOAH FIELDS DRAKE, C. E. (University of Arkansas), B. A. (Leland Stanford Jr. University), M. A. (Leland Stanford Jr. University), Ph. D. (Leland Stanford Jr. University).

*Professor of Geology and Mining Engineering and Head of Departments of Geology and Mining Engineering, 1912.*

GEORGE WESLEY DROKE, B. A. (University of Arkansas), M. A. (University of Arkansas), LL.D. (Hendrix College).

*Professor of Mathematics and Head of Department of Mathematics, 1897, 1880.*

BOLLING JAMES DUNN, B. A. (Bethel College), M. A. (Bethel College).

*Emeritus Associate Professor of Mathematics, 1917, 1894.*

\*Leave of absence winter term, 1919-20.

†Member of Experiment Station Staff.

†HENRY EDMUND DVORACHEK, B. S. A. (University of Minnesota).

*Professor of Animal Husbandry and Head of Department of Animal Husbandry, 1915.*

RUTH OPHELIA DYCHE, B. A. (University of Kansas).

*Assistant Professor in Home Economics, 1919, 1917.*

†JOHN ASBURY ELLIOTT, B. A. (Fairmont College), M. A. (University of Kansas), Ph. D. (University of Illinois).

*Professor of Plant Pathology and Head of Department of Plant Pathology, 1917.*

ELIZABETH JACKSON GALBRAITH, B. A. (West Tennessee Christian College).

*Instructor in Art, 1906.*

NINA GILDERSLEEVE, B. A. (Oxford College).

*Instructor in Romance Languages, 1919.*

HARRISON CRANDALL GIVENS, B. M. E. (Cornell University), B. S. E. (University of Chicago).

*Professor of Industrial Education, 1918.*

WILLIAM NATHAN GLADSON, B. M. E. (Iowa State College), E. E. (Iowa State College), Ph. D. (McLemorsville College).

*Professor of Electrical Engineering and Head of Department of Electrical Engineering, 1895, 1894.*

†ROLAND M. GOW D. V. M. (Ohio State University).

*Professor of Veterinary Science and Head of Department of Veterinary Science, 1914, 1909.*

JAMES RICHARD GRANT, B. A. (University of Arkansas), Ph. B. (Northern Illinois Normal College), M. A. (University of Chicago).

*Assistant Professor of Education and Director of the Training School, 1914, 1912.*

JACK MURRAY GREATHOUSE, Sergeant, U. S. Army,

*Instructor in Military Art, 1919.*

HARRISON HALE, B. A. (Emory College), M. S. (University of Chicago), Ph. D. (University of Pennsylvania).

*Professor of Chemistry and Head of Department of Chemistry, 1918.*

HILLEL HALPERIN, E. E. (University of Liege, Belgium), M. A. (Columbia University).

*Assistant Professor of Mathematics, 1917.*

†Member of Experiment Station Staff.



KENNETH MACOMB HALPINE, Captain, U. S. Army.  
*Professor of Military Art and Head of Department of  
Military Art, 1919.*

JOHN LEONARD HANCOCK, B. A. (University of Chicago), M. A.  
(Indiana University), Ph. D. (University of Chicago).  
*Assistant Professor of Ancient Languages, 1915.*

DAVID CLINTON HANSARD,  
*Assistant in Violin, 1916.*

ARTHUR MCCracken HARDING, B. A. (University of Arkansas),  
M. A. (University of Chicago), Ph. D. (University of Chi-  
cago).  
*Professor of Mathematics, 1916, 1905.*

MARY GARNETT HARGIS,  
*Instructor in Romance Languages, 1911, 1908*

GEORGE EVERETT HASTINGS, B. A. (Princeton University), M. A.  
(Princeton University and Harvard University), Ph. D.  
(Harvard University).  
*Assistant Professor of English, 1919.*

JEAN HILL, B. A. (Tulane University).  
*Instructor in Home Economics, 1919, 1918.*

EDGAR A. HODSON, B. S. A. (Alabama Polytechnic Institute), M. S.  
(North Carolina State College).  
*Assistant Professor of Agronomy, 1919.*

JOELLE HOLCOMBE, B. A. (University of Arkansas), M. A. (Cor-  
nell University).  
*Assistant Professor of English, 1918, 1907.*

HENRY GUSTAVE HOTZ, Ph. B. (University of Wisconsin), M.  
A. (University of Wisconsin), Ph. D. (Columbia University).  
*Professor of Secondary Education, 1919.*

JEWELL CONSTANCE HUGHES, B. A. (University of Arkansas), M.  
A. (University of Missouri).  
*Instructor in Mathematics, 1918.*

JAMES M. HULL,  
*Instructor in Blacksmithing, 1919.*

\*ALLAN SPARROW HUMPHREYS, B. S. (Drury College).  
*Instructor in Chemistry, 1918.*

†RUSSELL AUBREY HUNT, B. S. A. (University of Kentucky).  
*Instructor in Animal Husbandry, 1919.*

\*Absent on leave, 1919-20.

†Member of Experiment Station Staff.

JAMES RALPH JEWELL, B. A. (Coe College), M. A. (Coe College),  
Ph. D. (Clark University).

*Professor of Education and Head of Department of  
Education, 1913.*

LYNN R. JOHNSON, Sergeant, U. S. Army.

*Instructor in Military Art, 1919.*

JAMES A. JONES,

*Instructor in Foundry, 1919.*

VIRGIL LAURENS JONES, B. A. (University of North Carolina),  
Ph. D. (Harvard University).

*Professor of English and Head of Department of Eng-  
lish, 1915, 1911.*

ARTHUR MELVILLE JORDAN, B. A. (Randolph-Macon College),  
M. A. (Trinity College, North Carolina), Ph. D. (Columbia  
University).

*Professor of Psychology, 1919, 1914.*

JOHN CLARK JORDAN, B. A. (Knox College), M. A. (Columbia  
University), Ph. D. (Columbia University).

*Professor of English and Public Speaking, 1918.*

\*\*ANTONIO MARINONI, B. A. (Desenzano, Italy), M. A. (Yale  
University).

*Professor of Romance Languages and Head of Depart-  
ment of Romance Languages, 1906, 1905.*

RALPH HEDGES MASON, B. S. A. (University of Missouri).

*Assistant Professor of Animal Husbandry, 1918.*

ERNEST BERTRAM MATTHEW, B. A. (Kansas State Normal  
School), M. S. (University of Wisconsin).

*Professor of Agricultural Education and Head of Depart-  
ment of Agricultural Education, 1919, 1918.*

OWEN MITCHELL,

*Assistant in Theory of Music and Piano, 1913,*

HUGH ELLIS MORROW, B. S. A. (University of Arkansas).

*Associate Professor of Chemistry, 1907, 1904.*

H. A. MUELLER, Sergeant, U. S. Army,

*Instructor in Military Art, 1919.*

\*\*Absent on leave, fall term, 1919-20.

†MARTIN NELSON, B. S. A. (University of Wisconsin), M. S. (University of Wisconsin).

*Professor of Agronomy and Head of the Department of Agronomy, 1918, 1908.*

†LYNN WESLEY OSBORN, B. S. A. (Iowa State College).

*Assistant Professor of Agronomy, 1916, 1913.*

STELLA PALMER, B. S. (University of Alabama), M. A. (Columbia University).

*Professor of Home Economics Education and Head of Department of Home Economics, 1918.*

FRANK WELLBORN PICKEL, B. A. (Furman University), M. S. (University of South Carolina), M. Sc. (University of Chicago).

*Professor of Zoology and Head of Department of Zoology, 1899.*

CLARE A. POLAND, B. S. (University of Kansas).

*Instructor in Civil Engineering and in Experimental Engineering and Drawing, 1919.*

†JOHN WILLIAM READ, B. S. A. (University of Missouri), M. S. (University of Missouri).

*Professor of Agricultural Chemistry and Head of Department of Agricultural Chemistry, 1918.*

RICHARD HENRY RIDGELL, B. S. (Clemson Agricultural College).

*Instructor in Agricultural Chemistry, 1916.*

GILES EMMETT RIPLEY, B. S. (Purdue University), M. S. (Purdue University).

*Professor of Physics and Head of Department of Physics, 1908.*

HARRY ROBERT ROSEN, B. S. (Pennsylvania State College), M. S. (University of Wisconsin).

*Assistant Professor of Plant Pathology, 1918.*

†WARD HARRISON SACHS, B. S. (Illinois Wesleyan College), M. S. (University of Missouri).

*Professor of Agronomy, 1919.*

WARREN RUSSELL SPENCER, B. A. (University of Indiana), B. S. in C. E. (Rose Polytechnic Institute).

*Assistant Professor of Civil Engineering, 1919.*

†Member of Experiment Station Staff.

ALVIN A STEEL, B. S. in C. E. (University of Nebraska), E. M. (Columbia University).

*Acting Professor of Geology and Mining, 1920.*

WILLIAM BOYD STELZNER, B. E. E. (University of Arkansas), E. E. (University of Arkansas), M. S. (Ohio State University).

*Professor of Electrical Engineering, 1919, 1909.*

CHARLES LESLIE STEWART, B. A. (Illinois Wesleyan University), M. A. (University of Illinois), Ph. D. (University of Illinois).

*Professor of Economics and Sociology and Head of Department of Economics and Sociology, 1918.*

GEORGE PATRICK STOCKER, B. S. in C. E. (University of Wisconsin).

*Professor of Civil Engineering and Head of Department of Civil Engineering, 1919.*

†SAMUEL RODMAN STOUT, B. S. A. (University of Arkansas).

*Assistant Professor of Animal Husbandry, 1919, 1916.*

BEULAH SUTTON, B. A. (University of Arkansas), Ph. B. (University of Chicago).

*Supervisor of English in Training School, 1919.*

†JOSEPH EARLE SYFERD, D. V. M. (Ohio State University).

*Assistant Professor of Veterinary Science, 1919.*

HENRY HARRISON STRAUSS, B. A. (Wooster College), M. A. (Tulane University).

*Professor of Ancient Languages and Head of Department of Ancient Languages, 1914, 1913.*

WILLIAM LEWDY TEAGUE, B. E. E. (University of Arkansas).

*Instructor in Electrical Engineering, 1919.*

LILLIAN TAYLOR,

*Instructor in Romance Languages, 1919.*

DAVID YANCEY THOMAS, B. A. (Emory College), M. A. (Vanderbilt University), Ph. D. (Columbia University).

*Professor of History and Political Science and Head of Department of History and Political Science, 1912, 1907.*

HENRY DOUGHTY TOVEY,

*Professor of Theory of Music and Piano, and Director of Department of Fine Arts, 1908.*

†Member of Experiment Station staff.



HARVEY McCORMICK TRIMBLE, B. S. (University of Michigan).  
*Instructor in Chemistry, 1918.*

MAURICE ELDRED VOTAW, B. J. (University of Missouri)  
*Instructor in Journalism, 1919.*

JULIAN SEESEL WATERMAN, B. A. (Tulane University), M. A.  
(University of Michigan).  
*Instructor in Economics, 1914.*

CLAUDE HARRISON WATTS, B. A. (University of Illinois).  
*Instructor in Economics, 1918.*

LILLIAN E. WILLIAMS,  
*Instructor in Physical Education for Women, 1918.*

BIRTON NEILL WILSON, B. Sc. M. E. (Georgia School of Technology), M. E. (University of Michigan), M. M. E. (Cornell University).  
*Professor of Experimental Engineering and Drawing, and  
Head of Department of Experimental Engineering and  
Drawing, 1917, 1896.*

ELIZABETH PURNELL WILSON,  
*Assistant in Education, 1919.*

†CLAUDE WOOLSEY, B. S. A. (University of Missouri), M. S.  
(Iowa State College).  
*Assistant Professor of Horticulture, 1919.*

†Member of Experiment Station staff.

STANDING COMMITTEES OF THE UNIVERSITY  
SENATE, 1919-1920

*Accredited Schools*—Professors Dvorachek, Baender, Read, Morrow, Miss Hargis.

*Advisers*—Deans Nelson, Gladson, Jewell, Drake.

*Athletics*—Professors Wilson, Marinoni, President Futrall, Mr. Stout, Mr. Craig.

*Catalog*—Professors Adler, Hotz, Stocker, Baerg, Mr. Votaw, the Registrar.

*Commencement*—Professors Ripley, Tovey, Miss Holcombe, Mrs. Crockett, Professor Drake.

*Discipline and Attendance*—Dean Gladson, Professors Strauss, Dvorachek, A. M. Jordan, Stewart, Miss Davis.

*Graduate Study*—Dean Jewell, Professors Elliott, Hancock, Hale, Buchholz.

*Honorary and Higher Degrees*—Dean Drake, Professors Read, Pickel, Adler, Grant.

*Inter-Collegiate Debating*—Professors J. C. Jordan, Stewart, Jones, Thomas, Mr. Waterman.

*Library*—Professors Drake, Thomas, Elliott, Dean Jewell, Miss Vaulx.

*Schedule*—Professors Wilson, Cooper, A. M. Jordan, Hancock.

*Statistics*—Professors Baender, Bleecker, Miss Palmer, Miss Galbraith, Dr. Clevén.

*Student Affairs*—Dean Gladson, Professors Jones, Hale, Miss Davis, Miss Holcombe.

*Student Organizations*—Professors Stewart, Stelzner, Cooper, Hastings, Halperin.

*Student Publications*—Professors Ripley, Stocker, Grant, Mr. Watts, Mr. Votaw.

## GENERAL INFORMATION

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### DIVISIONS

The University of Arkansas is composed of the following divisions: The College of Arts and Sciences, the College of Education, the College of Engineering, the College of Agriculture, the Agricultural Experiment Station, and the University Extension Division, including extension in agriculture and home economics and general extension, at Fayetteville; the College of Medicine, at Little Rock; and the Branch Normal College, at Pine Bluff.

### LOCATION

Fayetteville is located in Washington County, in the northwestern part of the state, in the heart of the Ozark Mountains. The elevation of the town is about 1,500 feet. The surroundings are of great natural beauty, and the climate of the region is excellent.

Fayetteville may be reached both from the north and from the south by the Texas branch of the St. Louis and San Francisco ("Frisco") Railroad. The Muskogee division communicates with the west.

The moral and religious conditions of the community are most favorable. There are fourteen churches in the town, representing nine denominations. The pastors of these churches actively interest themselves in the moral and spiritual welfare of the students.

### HISTORY

The University of Arkansas owes its origin to an Act of Congress, approved July 2, 1862, providing that public lands should be granted to several states, to the amount of "thirty thousand acres for each senator and representative in Congress," from the sale of which there should be established a perpetual fund, "the interest of which shall be inviolably appropriated by each state, which may take and claim the benefit of this Act, to the endowment, support, and maintenance of at least one college, where the leading objects shall be, without excluding other scientific and classical studies and including military

tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislature of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This act forbids the use of any portion of the aforesaid fund, or the interest thereon, for the purchase, erection, or maintenance of any building or buildings. The states accepting the provisions of the act are required to provide for the construction and maintenance of the necessary buildings, and for the expenses of administration in carrying out the purposes of the act.

The general assembly of the state accepted the national law by passing an act, approved March 27, 1871, which provided for the location, organization, and maintenance of the University of Arkansas. Fayetteville, Washington County, was selected as the seat, and the institution opened on January 22, 1872.

The Experiment Station owes its origin to an act of Congress of March 2, 1887 (the Hatch Act), under which the University receives \$15,000 annually for the maintenance of the Experiment Station "to aid in acquiring and diffusing among the people useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." In 1906 Congress passed an act increasing this appropriation by the sum of \$5,000 the first year, and providing for an additional increase of \$2,000 per annum, until such increased appropriation shall reach \$15,000 annually.

Under an act of Congress, approved August 30, 1890, the University receives \$25,000 annually, "to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science with special reference to their application to the industries of life."

On March 4, 1907, Congress passed an act increasing this appropriation at the rate of \$5,000 per annum, until the total amount appropriated annually shall reach \$50,000.

#### RESOURCES

The University owns at Fayetteville equipment, buildings, and grounds estimated to be worth about \$750,000. The productive funds, derived entirely from federal land grants, amount to \$132,666. The University receives annually from the federal government the sum of \$36,363 for the support of the Agricultural and Mechanical college. It also receives annually from the federal government \$30,000 for the Agricultural Experiment Station. For the year 1918-1919 it received a state appropriation of



approximately \$180,000, exclusive of extension work in agriculture and home economics. For the latter purpose it received during the same period from the state and federal governments an appropriation of approximately \$107,304. The income from endowment was \$9,143.

The total receipts of the University for the year ending June 30, 1919, were \$401,474. State appropriations were apportioned as follows: University, \$143,407; Agricultural work, \$40,293; Extension and Home Economics, \$38,930. Federal funds: Extension and Home Economics, \$68,374; Morrill fund for support of the Agricultural and Mechanical college, \$36,363; Experiment Station, \$30,000. The income from student fees was \$29,233; miscellaneous receipts were \$19,874.

The total expenditures for all purposes for the year ending June 30, 1918, were \$374,295.

#### BUILDINGS AND EQUIPMENT

The campus comprises a tract of land of about one hundred twenty acres including some fifteen buildings. The University has its own heating plant and is supplied with electric light and water from the city plants.

#### DORMITORIES

Three dormitories are provided for the housing of men students. *Buchanan Hall*, a three-story brick structure, contains about forty student rooms. *Hill Hall*, named in honor of Lieutenant General D. H. Hill, C. S. A., President of the University from 1877 to 1884, was erected in 1901. It is a three-story brick structure, containing a recreation hall, dining hall, kitchen, store-room, and about twenty rooms for students. *Gray Hall*, erected in 1905, was named in honor of Colonel O. C. Gray, C. S. A., sometime professor of mathematics in the University. The building is two stories in height, is built of brick, and accommodates about one hundred students.

The dormitory for young women, *Carnall Hall*, erected in 1905, was named in honor of Miss Ella Carnall, Ph. M., sometime associate professor of English and modern languages in the University. The building is of brick construction and has three stories. It contains rooms sufficient for about one hundred students, with parlors, a dining-room, and a recreation room.

#### UNIVERSITY HALL

This structure, erected in 1872, is the "old main building" of the University. It is five stories in height and forms three sides of a quadrangle. Its seventy rooms serve as the offices of ad-

ministration, and the class-rooms and some laboratories of the College of Arts and Sciences.

*Library.* The general library, which occupies the south wing of the first floor of University Hall, provides a large, well-lighted room for reading and study. The total number of volumes is about 23,000 bound and 2,200 unbound, exclusive of government publications. The reference works include 1,750 bound magazines and 62 well selected current periodicals. In addition to the main library, there are in University Hall libraries of the departments of Biology, Geology, and Mathematics. Other departmental libraries are housed in Peabody Hall and in the Agricultural, Chemistry, and Engineering buildings. These departmental libraries contain approximately 13,000 bound and 500 unbound volumes.

*The Biological Laboratories.* The laboratories for Botany and Zoology are situated on the second floor and have accommodations for about thirty-six students each. The equipment, consisting of the usual furniture, compound microscopes, lantern, microtomes, incubators, sterilizers, paraffin baths, etc., is adequate for the courses offered. There are also numerous charts, skeletons, models, slides, and an effort is being made to build up herbarium collections representative of the flora of the state.

The *Geological Laboratory* occupies part of the fourth floor. The department is equipped with ordinary maps, relief maps, minerals, and rock specimens; and with aneroid barometers, compasses, hand-levels, and pedometers, for field work. There is also a well equipped laboratory for determinative mineralogy.

The *Museum* is located on the fourth floor. The collections have been made with the view of facilitating instruction in biology and geology. The *mineral collection* contains about three thousand specimens, representing different mineral groups. The *petrographic collection* consists of a large number of specimens representing sedimentary, igneous, and metamorphic rock, with a large collection of stone from different parts of the country. The *paleontological collection* contains a large number of invertebrate fossils representing principally the fauna of the different geological horizons in northern Arkansas. The *Major Earle Collection* of minerals and fossils was placed in the museum by Major F. R. Earle. The *zoological* and *botanical collections* consist of two hundred birds and mammals, representing eighty species; two hundred reptiles and amphibians, representing forty species; fifteen hundred fishes, representing three hundred fifty species; one thousand insects and other invertebrates, representing two hundred species; and several skeletons. Of various *relief maps* there are: geological relief maps of Arkansas, Colorado Canyon, cen-

tral Tennessee, and the United States; a convex relief map of the United States on a section of a globe sixteen feet in diameter; relief maps of Carmel Bay, California, Ice Springs Crater, Utah, Yosemite Valley, Palestine, Mount Vesuvius, and San Francisco; and a sectional geological relief map of the Leadville region in Colorado.

*Art Studio.* The art studio is located on the third floor of the north wing. It is equipped for work in design, drawing, and painting.

The *practice rooms* of the Department of Music are located on the fourth floor of the north wing.

*Women's Gymnasium.* For the physical training of the young women students there is provided a gymnasium in the south wing. It has been equipped with modern apparatus, and is provided with lockers, dressing-rooms, and shower baths.

*Armory.* The armory occupies a room sixty by eighty feet in the basement of the north wing. The equipment consists of 250 rifles (Springfield, model 1903); 250 sets of field equipment (web, model 1910); 40 sets of officers' equipment (web, model 1916); 20 complete field sketching sets; 20 gallery rifles, complete with 100 rounds of gallery ammunition for each student; 8 non-commissioned officers' swords; 4 sets of signal flags; 20 music stands and music pouches; 4 bugles; all this is furnished by the national government. National and state colors, cadet officers' swords, and a set of band instruments have been purchased by the University.

*Book Store.* The book-store on the first floor carries a complete line of text-books and supplies.

## CHEMISTRY HALL

This building, erected in 1905, is situated north of University Hall. On the first floor are laboratories for quantitative and qualitative analysis, for organic and physical chemistry, besides a balance-room and a library. On the second floor are a large lecture-room and a general laboratory for first year students. In the basement are store-rooms and a laboratory for assaying.

The *Agricultural Hall*, the *Experiment Station Building*, the *Entomology Building*, and the *Dairy Building* provide class rooms, offices, and laboratories for the College of Agriculture.

## AGRICULTURAL HALL

This building was erected in 1905 and consists of three stories over a basement. The *Cotton Laboratory* located in the build-

ing is equipped for a practical as well as for a technical study of cotton and cotton fiber. The laboratory is well supplied with modern machinery and apparatus. A large number of samples is available for purposes of demonstration and research. The *Field Crops Laboratory* is located in Agricultural Hall. It is well equipped with all the necessary apparatus and material used in the study of types, strains, and quality, and the scoring and judging of staple and miscellaneous crops. The *Soils Laboratory* located in Agricultural Hall, is equipped with modern apparatus for the study of the formation, composition and character of soils, with a reference to their fertility, adaptability and treatment affecting their productivity and conservation.

### EXPERIMENT STATION BUILDING

The *Agricultural Chemistry Laboratory* is equipped with all the necessary materials and modern apparatus used in the field of Analytical Chemistry applied to agriculture. *Bacteriology Laboratory*. This is the research laboratory used by the members of the staff and advanced students. The laboratory is equipped with all the latest apparatus and adequate materials used in the study and preparation of cultures of microorganisms, serums, and vaccines. Another *Bacteriology Laboratory* is located in the Dairy Building. The *Plant Pathology Laboratory* has a complete and modern equipment including all the apparatus and materials used in the study of mycology and plant diseases. The *Horticultural Laboratory* has a complete equipment of all such machinery and apparatus as is used in a practical as well as theoretical study of the various phases of Horticulture. The *Greenhouse* offers good facilities for research work. A part of it is fitted up for a student laboratory.

### THE ENTOMOLOGY BUILDING

The *Entomological Laboratory* is well equipped with all such instruments and apparatus as are used in the study of insect anatomy and development. The collection of insects is valued at approximately \$800.00. The new bungalow-type insectary offers excellent facilities for rearing insects under natural conditions.

### THE DAIRY BUILDING

This structure was erected in 1905 and consists of two stories over a basement. The Dairy Laboratory is equipped with a complete line of standard dairy machinery. A modern creamery is operated thruout the year. Student laboratories are equipped with all apparatus for the study of sanitary and standard home dairying.



### ANIMAL HUSBANDRY BARN

Modern barns for all the different types of livestock are available for purposes of demonstration and study. Livestock—various breeds of horses, cattle, goats, sheep, swine and poultry—form the basis for instruction in animal industry.

### PEABODY HALL

Peabody Hall is used exclusively by the College of Education and is one of the most attractive buildings on the campus. It is a modern fireproof building, containing about thirty rooms adapted especially to the work in the training of teachers. In it are located the offices of the Dean of the College of Education and of the other members of the faculty of this college. It also contains a large assembly room, a manual training shop, home economics laboratories, quarters for the demonstration and training school, and large well-lighted class rooms in which the college classes in Education and Psychology meet.

*Training School*—Ample provision has been made for the training school for teachers. Rooms are provided where the children doing work of both elementary and high school character are taught. Any pupil residing in the State of Arkansas is eligible for admission to the University Training High School, provided that he has exhausted the school privileges of his home community. Such pupils must be at least fifteen years of age and of good moral character.

*Home Economics Laboratories*—Practically all of one floor is occupied by the laboratories for cookery, sewing, millinery, and table service, and the reception room. The equipment in each laboratory is new and modern, chosen for its utility and convenience. It is sufficient to carry on successfully the work of the classes in the various branches of home economics.

### ENGINEERING HALL

Erected in 1904, this building lies a short distance to the south of University Hall. The first story is built of native sandstone, and the upper two stories are of brick trimmed with limestone. The building contains the offices, recitation rooms, drawing rooms, and testing laboratories of the physics, and civil, electrical, and mechanical engineering departments.

The *civil engineering testing laboratory* is located in the northwest basement of the Engineering building. The room is well lighted and has 2,450 square feet of floor space. The road material testing equipment is complete for all standard tests.

It includes a Duval abrasion machine, a diamond core drill, a diamond saw and grinding lap machine, a Dory hardness machine, a Page impact machine, a ball mill, a briquette moulding machine, a Page impact machine for testing cementing value, a small stone crusher, a rattler for testing paving brick, an abrasion machine for broken stone, and chemical balances for determining specific gravity.

The cement testing equipment is complete for the standard tests and consists of gravel, sand and cement sieves, specific gravity apparatus, Vicot needle apparatus, briquette moulds, moist closet, storage tanks, compound lever briquette testing machine, and mixing tables.

The equipment for metal tests consist of a 4000 pound wire and rod testing machine, a six inch ram hydraulic compression machine, a 5000 pound transverse testing machine, and a Fremont impact testing machine.

The equipment for hydraulic experiments consists of a Pelton water wheel, an hydraulic engine, water wiers, hook gauge, current meter, water meters and a sixty foot head constant level water tank.

The laboratory is also supplied with instruments such as a Berry strain gauge micrometer, vernier calapers, etc.

The *civil engineering instrumental laboratory* is located on the first floor. It is provided with all the necessary instruments for work in land, railroad and city surveying and office work. The equipment of field instruments has been so selected as to afford students the opportunity of becoming familiar with the instruments of the different manufacturers. Among the instruments there are engineers' transits and Y levels, theodolites, transit and solar attachment, compasses, hand levels, standard and ordinary steel tapes, plane tables, sextant and aneroid and mercurial barometers. An equipment for practical astronomy has been added consisting of a large alacimuth, reading to seconds by levels and micrometers; a sidereal clock, with break-circuit attachment; and a chronograph, reading to tenths of seconds.

The *Electrical Engineering Laboratories* offer excellent facilities for experimental work. The main laboratory, east end of basement, is supplied with a variety of types and sizes of direct current and alternating current generators, motors, control equipment and instruments; storage batteries, converters and rectifiers, synchronous converters, transformers, condensers, inductances, etc. Adequate switchboards and wiring are provided for convenience in testing. A well equipped instrument and repair shop is maintained in connection with the laboratory.

The standardizing laboratory in the main laboratory is equipped with standards and precision instruments and is wired and arranged for facility in standardizing work.

The photometric laboratory has a standard photometer bar and accessories, several types of portable photometers, and lighting units and equipment.

The telephone laboratory has magneto and central energy switchboards complete, test lines, and numerous telephone and wireless instruments.

The *experimental engineering laboratory* contains the following machinery: one 35-horsepower compound automatic steam engine, one 15-horsepower Atlas engine, one 35-horsepower Nash gasoline engine, one Hornsby-Akroyd oil engine, one Kerr steam turbine, one 10-horsepower Weber gasoline engine, one small Cardinal gasoline engine, one 35-horsepower Westinghouse compound steam engine, one 50-horsepower Wheeler condenser with air, water, and circulating pumps, one pulsometer steam pump, one Duplex steam pump, one Cameron steam pump, and one 60,000-pound Rheile testing machine for testing materials such as wood, steel, and cast iron in tension and compression. This machine is also equipped for testing large beams of steel, concrete or timber.

The laboratory is well provided with apparatus for experimental work, including a Mahler bomb calorimeter for testing fuels, an Orsat apparatus for flue gas analysis, a Junker calorimeter, an Olsen oil testing machine, a viscometer, a flash point tester, a Pitot meter, and anemometer, pressure gauges, measuring tanks, water meters, and scales.

The steam boilers used for heating the University buildings are arranged so as to be available for experimental work. The Corliss shop engine, the feed water pumps, and the Westinghouse air compressor are also used for purposes of instruction.

## MECHANICAL HALL

*Mechanical Hall* contains the machine shop, wood shop, foundry and forge shop. The shops will accomodate about seventy-five students at one time. Adjoining on the east is a boiler room.

The *machine shop* contains a Corliss engine, which runs the machinery in the whole building, a large iron planer, a shaper, several lathes of different sizes and makes, a drill press, grinding machines, a milling machine, and a good supply of hand tools, benches, and materials. The *foundry* contains one Colleau cupola with a capacity of one and one-half tons of iron an hour, one brass furnace of one hundred and fifty pounds capacity,

Buffalo pressure blower, and core oven. The *wood shop* contains one buzz planer, one large cylinder planer, a circular saw, a band saw, five smaller lathes, one 18-inch pattern maker's lathe, one double column shaper, and twenty-six benches, each equipped with a complete set of carpenter's tools. The *forge shop* contains eight Buffalo forges with down draft which takes the smoke away through an underground pipe, thus avoiding the dirt and smoke of the ordinary blacksmith shop. It also contains a shearing and punching machine, eight anvils of different weights, and all the necessary blacksmith tools for the eight forges.

The *auto shop* contains several touring cars, one Ford truck, one Republic truck, and numerous four, six and eight cylinder motors. There are also plenty of magnetos and batteries for experimental work.

## PHYSICS HALL

*Physics Hall*, built in 1917, is located southwest of University Hall. It is a two-story building containing ten rooms well arranged for lecture and laboratory work in physics. On the first floor are two laboratory rooms, a large lecture room, a store-room, and an office room. The second floor includes a large lecture room, a laboratory room, a photometric room, a workshop room and a library. The building is equipped with gas, water, and electric light, and is steam heated. The lecture room tables are wired for both alternating and direct currents, piped for water, gas, high pressure steam, high pressure air, and vacuum work. Concrete piers are provided for all delicate work in the laboratories and for the delicate balances. The equipment of apparatus is fairly complete and is of exceptional quality and of sufficient variety and duplication to permit the instruction of large sections in the laboratories.

## Y. M. C. A. HUT

A Hut of the standard "D" type serves as headquarters for association activities. The spacious hall, large fire-place, and victrola make the building an attractive place for social gatherings. It is equipped with a modern motion-picture machine which is used for entertainments twice a week. Eight current magazines are provided by the association.

## INFIRMARY

In order to safeguard the health of the students, the University has provided a well-equipped infirmary in charge of a trained

nurse. The building is furnished with open and private wards for men and women, and a well isolated ward for contagious cases.

### ATHLETIC FIELD

Grounds for athletic sports are located on the west side of the campus. The football gridiron and baseball diamond are in the south field. The north field contains the quarter mile track and facilities for basket ball, volley ball, and other games. Tennis courts for men and women are located near the dormitories. Ample provision is arranged for the seating of spectators at the athletic games.



# ADMISSION

## GENERAL REQUIREMENTS

Admission to any college of the University of Arkansas may be obtained either by a certificate from an accredited high school or preparatory school, or by examination. For unconditional entrance, the candidate must be a graduate of an accredited four-year high school or preparatory school, and must have completed satisfactorily at least fifteen entrance units, so chosen as to include those subjects prescribed by the particular college he desires to enter. When a candidate is deficient in not more than two units, he may be allowed conditional entrance with the provision that all such deficiencies must be removed during the first year of his attendance at the University by offering high school courses, or University courses of a preparatory nature, in satisfaction of the deficiencies. When a candidate enters with less than four full years of high school work, he is conditioned in two units. Any student who has completed fifteen or more units in acceptable courses in the high school may have this condition in two units removed by making a passing grade in twelve hours of work during the first term of the freshman year, otherwise he shall make up this condition in the manner described above. It should be understood that students who are admitted with conditions of more than one unit, as a rule, will find it necessary to attend an additional term or year in order to meet the requirements for a degree.

## ADMISSION BY EXAMINATION

Entrance examinations are offered at the University during the opening week of school, September 20 and 21, inclusive. Students living at a distance from the University may secure special examinations to be conducted by the school principal or the county examiner under conditions that will be indicated when the application is made. Requests for examinations must be mailed so as to reach the Registrar not later than September 1.

## ADMISSION BY CERTIFICATE

Students may enter the freshman class by certificate from any high school or preparatory school in the state accredited by

the University in thirteen or more units, or from any high school or preparatory school in another state similarly accredited by the state university of that state. An official statement of the student's record, containing specific information as to the kind and extent of work done, should be mailed to the Registrar of the University not later than September 1. Blank forms for this purpose will be furnished upon request. *Diplomas of graduation will not be accepted in lieu of certificates.*

Students who have been previously admitted to another college or university of equal standing will be allowed to enter without conditions upon presenting a certificate of honorable discharge and an official statement of the work accepted for entrance by the institution last attended, provided it appears that such work is substantially equivalent to the work required for entrance to the University of Arkansas.

#### OUTLINE OF ENTRANCE REQUIREMENTS

##### COLLEGE OF ARTS AND SCIENCES

The following units are prescribed for the course leading to the degree of *Bachelor of Arts*:

English, three units.  
Algebra, one unit.  
Geometry, one unit.  
History, one unit.

French, German, Greek, Latin, or Spanish, three units, at least two of which must be in the same language. When a student is not able to meet this requirement at entrance, he may be allowed to take as a part of his college course, in addition to the language requirement for a degree, a one-year course in foreign language of not less than three hours for each entrance unit in which he is deficient.

Enough additional units to bring the total to fifteen, including not more than four units in vocational and business subjects.

The following units are prescribed for the course leading to the degree of *Bachelor of Science in Chemistry*:

English, three units.  
Algebra, one unit.  
Geometry, one unit.  
History, one unit.  
Physics, one unit.

Enough additional units to bring the total to fifteen, including not more than four units in vocational and business subjects.

The following units are prescribed for the special courses in music:

English, three units.

History, one unit.

French, German, Greek, Latin, or Spanish, three units at least two of which must be in the same language. When a student is not able to meet this requirement at entrance, he may be allowed to take as a part of his college course, in addition to the language requirement for a degree, a one-year course in foreign language of not less than three hours for each entrance unit in which he is deficient.

Enough additional units to bring the total to fifteen, including not more than four units in vocational and business subjects. A maximum of three units in music may be used as part of the elective work.

### *COLLEGE OF EDUCATION*

The following units are prescribed for all courses:

English, three units.

History, one unit.

Science, one unit.

Enough additional units to bring the total to fifteen, including not more than four units in vocational and business subjects.

### *COLLEGE OF ENGINEERING*

The following units are prescribed for all four-year courses\*:

English, three units.

Algebra, one and one-half units.

Geometry, one unit.

History, one unit.

Enough additional units to bring the total to fifteen, including not more than four units in vocational and business subjects.

*COLLEGE OF AGRICULTURE*

The following units are prescribed for all the four-year courses:

- English, three units.
- Algebra, one and one-half units.
- Geometry, one unit.
- History, one unit.
- Science, one unit.

Enough additional units to bring the total to fifteen, including not more than four units in vocational and business subjects.

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\*For a statement of the entrance requirements to the engineering trade courses, see page 141.

**DESCRIPTION OF SUBJECTS ACCEPTED FOR ADMISSION**

The following statements indicate in a general way the preparation which is expected in the various subjects accepted for admission. The numbers in parentheses following each subject indicate the minimum and maximum number of units which may be offered in that subject. The term unit is understood to represent a high school or preparatory course continued through a school year of thirty-six weeks with five recitations of forty-five minutes each a week.

**ENGLISH (3-4)**

In order to secure a definite plan of study and unity of method on the part of the preparatory school, the entrance requirement in English outlined below somewhat in detail, following the recommendation of the National Conference on Uniform Entrance Requirements in English.

The study of English in school has two main objects: (1) command of correct and clear English in written and spoken; (2) ability to read with accuracy, intelligence, and appreciation.

*Grammar and Composition.*—The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school, and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition, governing punctuation, the use of words, sentences, and paragraphs should be thoroughly mastered, and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise letter writing, narration, description, and expository and argument. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of

using good English in his recitations and various exercises, whether oral or written.

**Literature.**—The second object is sought by means of two lists of books, headed respectively, *Reading and Study*. From which may be framed a progressive course of literary education in five years. In connection with both lists, the student should be trained in reading aloud, and be encouraged to conduct a personal summary of the more important books, in a vocabulary of his own. As an aid to literary education, the student is advised to acquaint himself with the most important facts in the lives of the authors whose works he reads and with their place in literary history.

## LIST OF BOOKS, 1920-1922

The following list of Civil Liberties Library books is provided for the purpose of a "Restricted" list and is not intended to be final. The choice of books for review and status in the Committee is a rather subjective one. It may be changed from time to time, and may be added to or deleted from the Committee Library. Located at the Board of West 110th Street, New York City, it is to be noted that, although the Committee's list contains a number of books by living writers, it does not include contemporary novels of the present time. Such books will not be accepted as part of the Committee's program. The Restricted list is printed below, with semicolons used to set off the units. With a view to a large freedom of choice, the books on the Restricted list are grouped in the following groups. There may, of course, at least two exceptions are to be made, except as otherwise provided under Group 1.

### A. READING

**Group 1. Classics in Translation.**—*The Old Testament*, at least the chief narrative books in Hebrew, in the *Authorized Version*, and *Daniel* together with the books of *Esther* and *Judith*, the one with the one, and, if possible, books IX, X, and XI of the *Deuterocanonicals*, and the *Apocrypha* should be read in English translations of unusual literary excellence.

For any selection from this group, a selection from any other group may be substituted.

Group II. *Drama*.—Shakespeare, *Merchant of Venice*; *As You Like It*; *Julius Caesar*.

**Group III.** *Prose Fiction*.—Dickens, *A Tale of Two Cities*; George Eliot, *Silmarillion*; Scott, *Ivanhoe*; Hawthorne, *The House of the Seven Gables*.

**Group IV. Essays, Biographies, Etc.**—Addison and Steele, *The Sir*

[illegible]



## B. STUDY

Group I. *Drama*.—Shakespeare, *Macbeth* or *Hamlet*.

Group II. *Poetry*.—Milton, *L'Allegro*, *Il Penseroso*, *Comus*; Book IV of Palgrave's *Golden Treasury* (*First Series*) with special attention to Wordsworth, Keats, and Shelley.

Group III. *Oratory*.—Burke, *Speech on Conciliation with America*; Washington, *Farewell Address* and Webster, *First Bunker Hill Oration*, and Lincoln, *Gettysburg Address*.

Group IV. *Essays*.—Macaulay, *Life of Johnson*; Carlyle, *Essay on Burns*, with a brief selection from Burns's *Poems*.

## MATHEMATICS

*Elementary Algebra* (1).—Positive and negative numbers; addition, subtraction, multiplication, division; factoring, highest common divisor and lowest common multiple by factoring; fractions; equations of the first degree, in one, two and three unknowns, with numerous problems involving such equations; involution (omitting the binomial theorem); evolution (omitting cube root); elementary manipulation of surds; irrational equations; that lead to equations of the first degree; pure quadratic equations; affected quadratic equations by the method of completing the square and by factoring, with problems involving such equations. Hawkes-Luby-Touton, *First Course in Algebra*, or its equivalent, will be accepted as a satisfactory text.

*Higher Algebra* ( $\frac{1}{2}$ -1).—A review of elementary algebra with more difficult problems and with some demonstrational work; theory of quadratics, simultaneous quadratics, ratio and proportion, variation, progressions (arithmetical, geometrical, and harmonical) binomial theorem, and logarithms. Hawkes-Luby-Touton, *Second Course in Algebra*, or its equivalent will be accepted as a satisfactory text. One unit will be allowed for this course provided that the course is pursued during the fourth year, otherwise, only one-half unit will be allowed.

*Plane Geometry*. (1).—Any of the standard texts on this subject will furnish the necessary preparation. The exercises requiring solutions and demonstrations should be emphasized.

*Solid Geometry*. ( $\frac{1}{2}$ ).—Any of the standard texts on this subject will furnish the necessary preparation. The exercises requiring solution and demonstrations should be emphasized.

*Plane Trigonometry* ( $\frac{1}{2}$ ).—This should include a thorough study of some standard high school text, such as Harding and Turner's *Plane Trigonometry*. The exercises requiring solutions and demonstrations should be emphasized.

## HISTORY AND SOCIAL SCIENCES

## HISTORY

*Ancient History* ( $\frac{1}{2}$ -1).—The completion of a standard text-book, with emphasis on the history of Greece and Rome and some attention to geography, will satisfy the requirements for one unit.

*Medieval and Modern History* ( $\frac{1}{2}$ -1).—The completion of a standard text covering the history of Europe in medieval and modern times, some parallel reading, and a knowledge of the geography involved, will satisfy the requirements for one unit.

*English History* ( $\frac{1}{2}$ -1).—An advanced high school text should be used. Constitutional points should receive attention, and easily accessible documents should receive careful study.

*American History* ( $\frac{1}{2}$ -1).—An advanced high school text should be used and the subject should be taken preferably in the senior year. Current newspapers and magazines should be assigned as collateral reading.

#### SOCIAL SCIENCES

*Civil Government* ( $\frac{1}{2}$ ).—This should be a study of our government, national, state, and local, as it is organized and actually operated today. The instruction should aim to impart information essential to intelligent active citizenship, such as the division of the government into departments, their organization and functions; the methods of nominating, electing, and appointing men to office; of framing and amending constitutions, city charters, and statutes; of drawing grand and petit juries and the duty of the citizen to serve on them; the distinction between common law, state law, and constitutional law; between equity, civil, and criminal cases.

*Elementary Economics* ( $\frac{1}{2}$ ).—In the study of economics it is desirable to avoid two extremes, abstract theory on one hand, and controversial questions, such as the tariff, trusts, and trade unions, on the other hand. Emphasis should be placed on the historical and descriptive matter, especially relating to the economic development of England and the United States. Some good elementary text-book should be mastered and a reasonable amount of collateral reading required.

*Commercial Geography* ( $\frac{1}{2}$ ).—This describes and seeks to explain the commerce to today. The work should cover the ways in which commerce depends on nature and on man, the development of means of transportation and communication, and a detailed study of the several commercial regions of the world, with reference to resources, industries, transportation facilities, and commerce. It should be based on the text-book supplemented by map work and assigned readings.

#### LANGUAGES

##### LATIN

*Latin Grammar* (1).—This should include a thorough grounding in some standard elementary Latin Grammar, such as Bennett, Hale-Buck, or Allen and Greenough, revised edition. Proficiency is particularly desired in the following subjects: the analysis of the verb forms, the rules of syntax, and the principal parts of the irregular verbs.

*Caesar* ( $\frac{1}{2}$ -1).—First four books or selections from the seven books equivalent to four. The student is expected to be familiar with the life of Caesar and an account of his wars.

*Cicero* ( $\frac{1}{2}$ -1).—Any four orations from the following list: *Against Catiline*, *Poet Archias*, *Ligarius*, *Marcellus*, *Mamilian Law* (to count as two orations), the fourteenth *Philippic*. The student should also be familiar with the life of Cicero.

*Vergil* ( $\frac{1}{2}$ -1).—Six books of the *Aeneid*. The student should be familiar with the life of Vergil and an account of his times and writings. A correct rythmical reading of the text is to be encouraged.

##### GREEK

*Greek Grammar* (1).—This should include a thorough grounding in some standard elementary Greek Grammar, such as White's *First Greek Book*, with translation from Xenophon's *Anabasis*, Book I.

*Xenophon's Anabasis* (1-2).—Four books, accompanied by work in grammar and composition.

#### GERMAN

*German Grammar* (1).—The student should know the rudiments of grammar and be able to read easy prose at sight and to translate simple English sentences into German.

*Advanced German* (1-3).—The student should be able to read modern German prose and poetry at sight and to translate easy English narrative into German. A considerable amount of reading from such authors as Richl, Heyse, Freytag, Baumbach, Heine, Goethe, and Schiller will be expected.

#### FRENCH

*French Grammar* (1).—The student should be familiar with elementary French grammar, with special attention to the irregular verbs. He should be able to read easy prose at sight and to translate simple English sentences into French.

*Advanced French* (1-3).—The student should be able to read standard French prose and poetry at sight and to translate easy English narrative into French. A considerable amount of reading from such authors as Daudet, Loti, Sardou, Dumas, Augier, Labiche and Martin, and Hugo will be expected.

#### SPANISH

*Spanish Grammar* (1).—The student should be familiar with elementary Spanish grammar and should be able to read easy prose and to translate simple English sentences into Spanish.

*Advanced Spanish* (1-3).—The student should be able to read standard Spanish prose and poetry at sight and to translate easy English narrative into Spanish.

### NATURAL SCIENCES

All of the courses in natural science should include at least two 80-minute periods of laboratory work per week.

*General Science* ( $\frac{1}{2}$ -1).—This should include a study of the earth and the sun in their relations to man, based on some such text as Snyder's *First Year Science*. All branches of elementary science should be included.

*Physiology* ( $\frac{1}{2}$ -1).—This should include a thorough study of some standard high school text such as Hough and Lee or Martin, with notebooks, drawings, individual laboratory instructions, and demonstration work.

*Physical Geography* ( $\frac{1}{2}$ -1).—A thorough study of any standard high school text supplemented by laboratory exercises will satisfy the requirements.

*Physics* ( $\frac{1}{2}$ -1).—This should include a study of at least four of the following topics: mechanics of solids, liquids, and gases, sound, heat, light, electricity, and magnetism, based on some standard high school text and supplemented by laboratory exercises.

**Chemistry** ( $\frac{1}{2}$ -1).—The full year's work should include a study of both the metals and non-metals with laboratory experiments to illustrate the common chemical laws and the more simple chemical reactions.

**Biology** ( $\frac{1}{4}$ -1).—A thorough study of any standard high school text supplemented by laboratory exercises will satisfy this requirement.

**Botany** ( $\frac{1}{2}$ -1).—The course should follow as closely as possible the nature and work of plants during the changing seasons of the year. The major portion of the work should be with living plants, naming the common plants of the neighborhood, both cultivated and native, and studying plant parts from seed to maturity.

**Zoology** ( $\frac{1}{4}$ -1).—Animals should be studied as living units in their relation to one another and their environments. This study should include developmental stages as well as the adult stage. The aim of the teacher should be to foster a love for animate nature and to develop accuracy in observation and description.

## VOCATIONAL SUBJECTS

Not more than four units are allowed in vocational subjects, which include business subjects, manual training, domestic art and science, agriculture, and fine arts.

## BUSINESS SUBJECTS

**Commercial Arithmetic** ( $\frac{1}{2}$ ).—This should include a thorough study of some standard high school text such as Mills and Stone or Brown and Smith, and should be studied during the third or fourth year, otherwise, no credit will be allowed.

**Business Law** ( $\frac{1}{2}$ ).—Text book supplemented by study of a few typical cases, and practice in drawing up ordinary legal papers, such as bills, notes, checks, etc.

**Elementary Bookkeeping** (1).—A text book should be employed with exercises so arranged that no two pupils will do exactly the same work, and no credit should be allowed unless the work is done neatly, accurately, and at a satisfactory rate of speed. It is suggested that double records be provided, and all work be done in class under the eye of the instructor. The set used should include the journal, cash book, sales book, ledger, check book, bank pass book, and trial balance book.

**Advanced Bookkeeping and Business Practice** (1).—Thorough drill on standard business forms, such as bills, receipts, checks, and notes, also on the use and meaning of business symbols and abbreviations. The student should become acquainted with the bill and invoice book, and book-leaf and voucher systems of bookkeeping. Each student should carry on a business of his own, first as an individual, then as a partnership, and finally as a corporation. Credit on this course should mean that the student lacks only age and actual business experience to become a competent bookkeeper.

**Stenography and Typewriting** (1).—This work is expected to occupy not less than two periods daily for two years. No credit shall be given for either shorthand or typewriting if taken alone. Nothing but the touch method should be used in typewriting. The standards are: first, accuracy and speed in taking dictation and in coding notes; second, correct spelling, capitalization, punctuation, and range; third, the minimum speed at the end of the first year should be 75 words per minute in dictation and 25 words per minute on the machine, and at the end of the second

year, 100 words per minute in dictation, and 35 words per minute in transcribing notes. Thorough training should also be given in care of the machine, in modern methods of manifolding, and in filing papers.

### HOME ECONOMICS

*Domestic Science* ( $\frac{1}{2}$ -2).—This should include a study of the elements of domestic science, cooking, foods, nutrition, and dietetics, with laboratory exercises.

*Domestic Art* ( $\frac{1}{2}$ -2).—This should include a study of the elements of domestic art, sewing, textiles, and home furnishing and decoration.

These courses should include five periods a week of ninety minutes each.

### MANUAL TRAINING

Owing to the fact that drawing and shop work do not require outside preparation, only half units are allowed; that is, one full credit for two years of work of one period daily, or for one year of work two periods daily.

*Shop Work* ( $\frac{1}{2}$ -2).—A maximum of two units will be allowed for work in joinery, wood-turning, pattern-making, cabinet-making, forge shop and machine shop.

*Mechanical Drawing* ( $\frac{1}{2}$ -2).—A maximum of two units will be allowed for work in mechanical and machine drawing.

### AGRICULTURE

*Agriculture* ( $\frac{1}{2}$ -4).—One year in a standard high school based on textbook, laboratory, and field work will be counted as one unit. A maximum of four units will be allowed for work done at any of the district agricultural schools.

### SMITH-HUGHES AGRICULTURE AND HOME-ECONOMICS

*Smith-Hughes Agriculture* (1-2).—A maximum of two entrance vocational units for each full year's work in Smith-Hughes Agriculture will be allowed, provided that the total number of vocational units offered for admission, including other Smith-Hughes courses, may not exceed four.

*Smith-Hughes Home Economics* (1-2).—A maximum of two entrance vocational units for each full year's work in Smith-Hughes Home Economics will be allowed, provided that the total number of vocational units offered for admission, including other Smith-Hughes courses, may not exceed four.

### NORMAL TRAINING SUBJECTS

*Psychology* ( $\frac{1}{2}$ ).—One half unit will be allowed for a course based on some standard text, such as Colvin and Bagley, or Titchner.

*Pedagogy* ( $\frac{1}{2}$ ).—One-half unit will be allowed for a course based on some standard text, such as Seeley's *School Management* or Strayer's *Brief Course in the Teaching Process*.



## FINE ARTS

*Music* ( $\frac{1}{2}$ -2).—Credit will be granted in music to students from high schools whose music instructors are licensed, and whose courses are outlined by the State Music Teachers' Association. A year's work shall count as one-half unit, that is, a maximum of two entrance units shall be granted to students taking four years' work in music in the high school.

*Art and Drawing* ( $\frac{1}{2}$ -2).—One unit will be allowed for five hours of work per week for one year.

# LIST OF ACCREDITED HIGH SCHOOLS OF ARKANSAS

1919-1920

## CLASS "A"

*Four-year high schools accredited in fifteen or more units*

Arkadelphia	Leslie
Ashdown	Lewisville
Augusta	Little Rock
Batesville	Lonoke
Bentonville	Magnolia
Berryville	Malvern
Blytheville	Mammoth Springs
Booneville	Mansfield
Brinkley	Marianna
Camden	Marshall
Carlisle	Marvell
Clarendon	Mena
Clarksville	Monticello
Conway	Morrilton
Corning	Mountain Home College
Cotton Plant	Nashville
Crescent College (Eureka Springs, Ark.)	Newport
Crossett	North Little Rock
DeQueen	Osceola
Dermott	Ozark
Dierks	Paragould
Earle	Paris
El Dorado	Parkin
England	Piggott
Eudora	Pine Bluff
Eureka Springs	Portland
Fayetteville	Prairie Grove
Fordyce	Prescott
Forrest City	Rogers
Fort Smith	Russellville
Gravette	Searcy
Greenwood	Siloam Springs
Hamburg	Springdale
Harrisburg	Stamps
	Stuttgart

Harrison	Texarkana
Hazen	Thorton
Helena	Van Buren
Hope	Waldron
Hot Springs	Walnut Ridge
Jonesboro	Warren
Junction City	Wilmar
Lake Village	Wynne

*Accredited for Entrance to the College of Agriculture*

First District Agricultural High School, Jonesboro.  
 Second District Agricultural High School, Russellville.  
 Third District Agricultural High School, Magnolia.  
 Fourth District Agricultural High School, Monticello.

**CLASS "B"**

*Three-year high schools accredited in thirteen or more units and four-year high schools accredited in thirteen to fifteen units*

Beauxite	Lockesburg
Bearden	Magazine
Benton	Marked Tree
Cabot	McCrary
Columbus	McGehee
Cotter	Moro
Danville	Murfreesboro
Dardanelle	Newark
Des Arc	Rison
DeValls Bluff	Roe
Foreman	Sulphur Rock
Gentry	Sutton
Gillett	(Emmet, Ark.)
Glenwood	Tuckerman
Grady	Vanndale
Gurdon	Waldo
Hartford	Washington
Heber Springs	West Helena
Sloan-Hendrix Academy	Wilmot
(Imboden, Ark)	

**ADMISSION TO ADVANCED STANDING**

Advanced standing may be secured either by examination or by transfer of credits from another institution. In order to obtain such standing, application must be made to the Examiner

within the first six weeks during which the applicant is in attendance at the University. Studies completed in another college or university will be accepted for advanced credit only when certified to by the proper officials of that institution. Certificates for this purpose should include a complete record of the courses pursued with the number of weeks and hours per week spent upon each subject.

#### ADMISSION AS A SPECIAL STUDENT

A person of mature age, who is not a candidate for a degree, may be admitted as a special student under terms prescribed by the individual colleges. A special student is not required to meet the regular entrance requirements, but must satisfy the dean of the college in which he wishes to enroll that he is capable of carrying college work. In addition, each application must have the endorsement of the instructor whose work the applicant desires to take.

Admission as a "Special" does not exempt the student from Military Art in the case of men students, or from Physical Education in the case of women students.

*College of Arts and Sciences.* Applicants for enrollment as special students must be at least twenty years of age, except that in the Department of Fine Arts applicants may be admitted at the age of eighteen.

*College of Education.* Applicants for enrollment as special students must be at least twenty years of age.

*College of Engineering.* Applicants for enrollment as special students must be at least eighteen years of age, except that in the trade courses applicants may be admitted at the age of sixteen.

*College of Agriculture.* Applicants for enrollment as special students must be at least eighteen years of age, except that in the short course applicants may be admitted at the age of sixteen. All applicants must have had at least two years of practical farm experience.

Special students are subject to the same regulations as other undergraduate students. They may become candidates for a degree by complying with the necessary regulations. No person will be permitted to register as a special student for more than one year without the permission of the dean of the college concerned.

## FEES AND EXPENSES

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### BENEFICIARY APPOINTMENTS

The state law provides that one thousand students residing within the state may receive beneficiary appointments entitling them to free tuition. These appointments are apportioned to the various counties according to population, and are obtained from the county judge. Those who are unable to obtain appointments from the county judge may receive them from the President of the University until the number of one thousand is reached.

### FEES

All fees must be paid in advance to the Auditor at the beginning of each term. No student will be allowed to attend classes until his fees are paid.

Matriculation, student activities, and library fee (paid by all students) per term.....	\$7.00
Tuition fee (paid by all non-resident students and by others who do not hold beneficiary appointments) per term.....	4.00
Dormitory fee (paid yearly by all students living in the dormitories).....	5.00
Diploma fee (payable at graduation).....	5.00
Certificate fee (payable at graduation).....	2.50

A breakage deposit is required of all students pursuing laboratory courses, to cover the material and apparatus used and any breakage or damage. The balance of the deposit, after the necessary deductions are made, is refunded to the student at the end of the year.

### *SPECIAL FEES IN THE DEPARTMENT OF FINE ARTS*

Piano, or Organ, with Director, per term .....	\$22.00
Piano, with Assistant, per term.....	18.50
Voice, Violin, per term.....	18.50



Study of Opera Libretto, per term.....	3.50
Harmony, in class, per term.....	5.00
History of Music, in class, per term.....	5.00
Counterpoint, per term.....	5.00
Piano Practice, one hour daily, per term.....	2.00
Each additional hour daily, per term .....	1.00
Diploma fee, for completion of the special Diploma course in music.....	5.00
Certificate fee, for completion of the teacher's course in music .....	2.50

### ENGINEERING FEES

A fee of \$2.00 per term will be charged for all shop, laboratory and field courses in Engineering in which materials or supplies are used.

A fee of \$1.00 will be charged each senior student who presents a thesis. This fee is to cover the cost of binding the library copy.

### EXPENSES

The following estimates, based upon data secured from students recently in attendance, will give some idea of the cost of attending the University for a year.

	Low	Moderate	Liberal
Board, Laundry, Heat and Light.....	\$240.00	\$275.00	\$350.00
Books, Instruments and other supplies.....	25.00	35.00	40.00
Other expenses .....	40.00	50.00	80.00
Matriculation and Student Activities fee .....	21.00	21.00	21.00
	<hr/> 326.00	<hr/> 381.00	<hr/> 491.00

### BOARD AND ROOM

The men's dormitories provide accommodation for about two hundred and fifty students. The rooms are furnished with beds, springs, mattresses, chairs and tables. A charge of \$5 per year for each occupant is made. The recreation rooms and parlors in Hill Hall have been reconstructed, refurnished, and made very attractive. A large store room for the men's dormitories has also been built. Board, heat, light, and laundry are provided at cost, which is about \$25 per month.

The women's dormitory provides accommodation for about one hundred and twenty students. For rooms, furnished except for linen, towels and bedding, a charge of \$5 per each occupant is made. The cost of board at the women's dormitory is about \$25.00 per month.

Reservations for rooms in any of the dormitories should be sent to the Auditor of the University not later than September 1. No reservation will be made unless the dormitory fee of \$5 has been paid.

Lodging in private homes near the University may also be had at reasonable rates. Boarding places, other than the dormitories, must be selected from a list approved by the University authorities, and may not be changed except by the consent of the Dean of Women, or of the President.

## ORGANIZATIONS AND ACTIVITIES

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### CONVOCATION

Convocation exercises for the faculty and students are held in the auditorium on the first floor of University Hall at 11 o'clock on Tuesday of each week. The programs consist of addresses and lectures by men in public life, discussions of University affairs and problems, and musical numbers. Attendance at convocation exercises is required of all freshmen and sophomores.

### CHRISTIAN ASSOCIATIONS

The Christian Associations stand for spiritual, mental and physical development. Their mission is to befriend and help those who need friends and help, to apply Christian principles to college life, to train for aggressive religious work—in short, to prepare men and women to go out from the University to become religious, as well as business, social, and intellectual leaders.

The Young Men's Christian Association holds religious meetings for young men Sunday afternoons and Thursday evenings. The Young Women's Christian Association holds religious meetings for women Sunday mornings and Thursday evenings. A series of special evangelistic meetings is held once each year.

A most helpful feature of the work of the association is in the interest displayed in new students at the opening of the college year. Students are assisted in securing desirable rooms and boarding places. A bureau of information is conducted for the benefit of all students who need assistance. Each association employs a general secretary who gives full time to the work.

The University authorities are in hearty sympathy with the organizations and do everything in their power to aid in the work of both.

### INTERCOLLEGIATE DEBATE

The University holds annual debates with other collegiate institutions, each school being represented by one team on the affirmative side of the question and one team on the negative. The debates are held usually during the second week of April. Each member of the intercollegiate debating team is awarded an "A" to be worn on a fob or pin in recognition of his

services, and is allowed four term hours of credit towards a degree (see page 82, English 541).

#### ATHLETICS

The Athletic Board of Control, composed of four members of the faculty and three students, has general charge of athletics. The Director of Athletics, assisted by special coaches for foot ball and base ball, has the immediate supervision of all athletic activities for men students. The director of physical training for women teaches the courses offered to women.

The University is a member of the Southwest Intercollegiate Athletic Conference, and as such is governed by the rules of the Conference in all intercollegiate athletic contests. Some of the more important rules of eligibility are:

1. No student shall participate in any intercollegiate athletics until one year from the date of his registration in the institution which he represents.

2. No person not an amateur shall be allowed to represent any member of the Conference in any athletic contest.

3. A student transferring from one institution of collegiate rank to another shall not be eligible to compete in intercollegiate athletics until he has been a student for one year in the institution to which he transfers.

4. No person shall be permitted to participate in intercollegiate athletics who is not a student in good and regular standing, who is not taking at least the minimum amount of work prescribed in the regular course of study in his institution, and who is not making a passing grade in at least two-thirds of the normal amount of work prescribed.

5. No student shall be eligible to compete in intercollegiate athletics, who, during his last semester in attendance, failed to pass two-thirds of the normal work for his course.

6. If a man be dropped from an institution of the Conference on account of scholastic deficiency, he shall not be eligible to compete in athletics until he shall have completed one full year's work, passing two-thirds of the work taken.

#### ORGANIZATIONS AUXILIARY TO COURSES OF STUDY

The *American Institute of Electrical Engineers, University of Arkansas Branch*, meets regularly on Tuesdays throughout the school year, for the presentation of original papers and for

discussion of the regular Institute transactions of which advance copies are received. All students interested in electrical engineering are eligible to membership.

The *American Society of Mechanical Engineers, University of Arkansas Student Section*, meets regularly on the second and fourth Mondays of the month, during the school year. The meetings are devoted to the presentation of original papers and discussion of papers selected from those regularly presented before the American Society of Mechanical Engineers, of which advance copies are received. Occasionally a lecture by some prominent engineer takes the place of the regular program.

The *Agricultural Club* meets weekly to discuss topics of practical and theoretical interest to students of agriculture and current topics of general interest. Occasional lectures by experts in agriculture take the place of the regular programs.

The *Home Economics Club* is an organization of students who desire to promote the standards and ideals of Home Economics, and who wish to create a basis for wholesome social development.

The *Pre-Medical Club* is composed of students who are planning to take up the study of medicine. The object of the club is to aid these students in arranging their course of study and to give them an opportunity of hearing lectures on medical subjects.

#### LITERARY SOCIETIES

The *Garland-Lee*, and *Periclean* societies for men meet Saturday evenings to render programs consisting of prepared and extemporaneous debates, speeches, and readings. The *Sapphic* society for women meets Saturday evenings.

#### DRAMATIC CLUB

The *Black Friars* meet on alternate Tuesdays for the study of plays, classic and current, and for general information in matters pertaining to the drama and to the theater. Two plays are produced each year. Membership in the society is limited to twenty-five.

#### GLEE CLUB

The *Glee Club* is open to all men students. Membership is determined by competition.



## HONOR SOCIETIES

*Tau Kappa Alpha* is restricted to intercollegiate orators and debaters. The aim of the organization is to encourage and reward meritorious effort in public speaking.

*Tau Beta Pi* is restricted to engineering students. The object of the organization is to encourage scholarship and to foster liberal culture among engineering students. Eligibility to membership is based upon high scholarship and character.

*Skull and Torch* is restricted to juniors and seniors in the College of Arts and Sciences and the College of Education who are candidates for a degree. Eligibility to membership is based upon high scholarship, participation in student activities, and personal character.

*Pi Kappa* is an honorary sorority for young women interested in journalism. Election to *Pi Kappa* comes as a reward for consistent and efficient work on University publications.

*Phi Alpha Tau* is a national honorary dramatic fraternity and eligibility to membership is based on efficient work in the field of dramatic art.

*Alpha Zeta* is restricted to upperclassmen in the College of Agriculture. Eligibility to membership is based upon high scholarship and character.

*Pi Delta Epsilon* is restricted to upperclassmen. The purpose of the organization is to promote the interests of college journalism by making membership conditional upon faithful and efficient service on college publications.

*Scabbard and Blade* is restricted to cadet officers. Eligibility to membership is based upon efficiency, personal character and influence, and interest in military affairs.

## STUDENT PUBLICATIONS

*The University Weekly* is devoted to current events and matters of interest to the University as a whole.

*The Arkansan* is a literary magazine, published monthly during the school year.

*The Razorback* is published annually by the junior class. It contains pictures of individuals, classes, and organizations and serves as a history of the school year.

## HONORS, SCHOLARSHIPS, AND PRIZES

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### SCHOLARSHIPS

*Women's Clubs Scholarships.* The Federation of Women's Clubs of Arkansas offers two annual scholarships, one for men and one for women. Appointment to the scholarships is determined by competitive examinations held in June of each year by the county examiner or county superintendent under the direction of University authorities. Candidates must stand examination in fifteen units of high school work including those units prescribed for entrance to the University. Persons who wish to take the examinations should notify the University Examiner before May 1 so that examinations in the desired subjects may be forwarded to the examiner or superintendent in good season. Graduates of the high schools of Little Rock, Fort Smith, Helena, Texarkana, Pine Bluff, and Hot Springs are not eligible. The scholarships pay approximately \$150 each.

*Daughters of the Confederacy Scholarship.* The Daughters of the Confederacy of Arkansas have provided one scholarship.

*Elks' Scholarship.* The Benevolent and Protective Order of Elks has provided a scholarship to be awarded by the Federation of Women's Clubs. Correspondence should be addressed to Mrs. Edwin Bevens, Helena, Arkansas.

*University Scholarships.* The Board of Trustees has provided one scholarship annually to be awarded to the honor graduate of each fully accredited public high school within the state. In case a particular high school does not select any member of the graduating class as the honor graduate, the scholarship shall be awarded to the student who has made the highest average in his studies for the entire high school course. The scholarship grants exemption from the payment of matriculation, student activities, and library fees.

### HONORS

By a system of departmental, class, and graduation honors, the University gives official recognition of attainments in scholarship.

*Departmental Honors.* To be eligible for departmental honors, a student must have passed in at least twenty-seven term hours in the particular department with a grade of "A." From the students who are eligible for honors in a department, the teaching force of that department shall select the first and second. As a basis for this selection, all of the work done in the department, and general class standing, if necessary, shall be considered.

*Class Honors.* Any student who passes in at least twenty-four hours of collegiate work, receives a grade of "A" in not less than eighteen hours, and ranks not less than "C" in any course shall receive class honors.

*Honors at Graduation.* Any student who makes class honors in both his junior and senior years shall be termed an honor graduate.

All honors shall be published at commencement, and in the catalog for the following year.

All students who are honor graduates shall have the fact noted in their diplomas.

#### PRIZES

*William Jennings Bryan Prize.* The Hon. William Jennings Bryan has given to the University the sum of \$250, the interest on which is offered annually as a prize for the best essay on some topic relating to the problems of government. The contest is open to juniors and seniors. Further information may be obtained from the professor of economics and sociology.

*Troy W. and Jessie Lewis Economic Essay Prize.* Mr. Troy W. Lewis, of Little Rock, offers annually a prize of \$10 to that member of the senior class who writes and submits the best essay on some economic subject. Further information may be obtained from the professor of economics and sociology.

*Chi Omega Prize.* The Chi Omega sorority offers at each institution at which it has a chapter an annual prize of \$15 for the best essay on some topic connected with the study of sociology. The contest is open to all women of the University who are pursuing courses in economics or sociology.

*Brough Debating Medal.* Governor Charles Hillman Brough, formerly head of the Department of Economics and Sociology at the University, offers a medal of the value of \$20, or a cash prize of \$20, for excellence in debate, to be contested for by two representatives of each of the literary societies. Under the conditions of the award, two debates must be held during the

year, one formal, in which the speeches are prepared, valued at sixty per cent, and one informal, in which the speeches are extemporaneous, valued at forty per cent. These debates are designed to train students in the art of forensic speaking and to promote a friendly rivalry between the literary societies.

*Arkansas Engineering Society Prize.* The Arkansas Engineering Society offers a prize, the value of which does not exceed \$25, for the best thesis submitted by a member of the senior class in the College of Engineering.

*Science Club Prize.* The Science Club of the University offers a prize of a medal, or of scientific books or apparatus of like value, to a member of the senior class upon the basis of his grades in science courses pursued in residence at the University up to the beginning of the last term of his senior year.

To be eligible a student must have at least eight term hours of credits in three of the five following fundamental sciences: mathematics, physics, chemistry, botany, and zoology, and must show a total of not less than one hundred term credit hours in science, which must be chosen from the following subjects or groups: astronomy, botany, chemistry, geology, mathematics, physics, zoology, bacteriology, entomology and plant pathology, psychology, home economics, civil engineering, electrical engineering, mechanical engineering, agronomy and horticulture, animal husbandry and veterinary science.

In making this award the student's average in each subject is to be determined and the final average is to be the average of all sciences taken. All science courses taken by the student must be included.

The award shall be made by a committee appointed by the president of the Science Club composed of a representative from each of the colleges of the University. The successful candidates must be chosen from the three students standing highest on the list.

## RULES AND REGULATIONS

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Each student at the time of registration is given a copy of the rules and regulations for undergraduate students for the observance of which he will be held strictly responsible.

### GOVERNMENT

The government of the University is vested primarily in a Board of Trustees, consisting of the Governor of the State and the State Superintendent of Public Instruction, as ex-officio members, and seven other members, appointed by the Governor for a term of six years.

The administration of the University is vested in the President, the University Council, the University Senate, and the faculties and deans of the various colleges.

The President is the administrative head of the University. The University Council is composed of the President, the deans of the several colleges, and four other members, appointed by the President. The Council is the central executive body of the University and is advisory to the President.

The University Senate is composed of the President, the Registrar, the deans, and all heads of departments and full professors. The Senate is the general legislative body of the University.

The faculty of each college within the University has jurisdiction, subject to higher University authority, over all matters that concern exclusively that college.

The dean of each college is responsible for the carrying out of all University regulations within his college. The Dean of Women acts as an advisor to women undergraduate students and is charged with the general care and conduct of these students.

### DISCIPLINE AND ATTENDANCE

Students are required to be diligent in the pursuit of their studies and regular in their attendance at class. Those who fail to meet these requirements will be requested to withdraw.

Students are required to attend all meetings and examinations of courses for which they are registered. For each eleven credit hour absences the student shall be required to complete one extra hour for graduation.

Absences with athletic teams, debating teams, or other organizations which leave the University on official work, and absences of individuals who are permitted by the president to leave the University on official business pertaining to the University, or some organization thereof, shall count at half rate, provided the coach, manager, or other person in charge files with the Registrar, before leaving the University, a certificate, upon a form prescribed by the University, for each student who proposes to make the trip.

Absences of one full day or more, due to sickness of the student, or of a member of his immediate family, or to death in the student's immediate family, shall count at half rate, provided the student files in the office of the Registrar, not later than one week after his return to classes, upon a form prescribed by the University, a statement of the cause of his absence verified by the certificate of the attending physician. Such certificate forms may be obtained from the office of the Registrar.

Students incurring absences in accordance with the above regulations, may have the privilege of making up the lost recitations, as evidenced by turning in written work, or in some other manner satisfactory to the instructor concerned. When such lost recitations have been made up, the remaining absences shall be removed. Applications for the privilege of making up absences must be made to the Registrar *within one week* from the time of return to the University.

Each absence on the first day of any term, or on the day preceding or following any holiday, shall count as four, unless the student shall file with the Registrar a statement showing that such absence was caused by illness, death in the family, or some other cause which the Registrar may deem adequate.

The Registrar shall, at any time he may deem advisable, report to the Committee on Attendance and Discipline, any student who absents himself from his University duties without good reason.

A student who is absent from an examination must explain his absence to the University Examiner within a time set by the Examiner. Failing to do so, he will be given a grade of "F" in the course.

In accordance with state law, all students, members of the faculty, and employees of the University are required to present certificates of successful vaccination. Students who fail to present certificates will not be allowed to attend classes.



#### REGISTRATION

Students are required to matriculate and classify before the beginning of each term. Those who enter a course late will be held accountable for all work of the course previous to their entrance.

#### STUDENTS' WORK

A student in his first term at the University, unless he is registered in a class higher than the freshman, shall not be permitted to carry a greater number of hours than the normal number required in his course, provided that the dean of the college concerned may at his discretion allow such student to carry one hour more than the maximum prescribed. Students who have done work of an exceptionally high grade in the high school may be exempted from the operation of this rule by permission of the dean of the college concerned.

A freshman student who enters conditionally shall not be allowed to carry more than the normal number of hours required in his course. In computing this there shall be reckoned the work that he is doing to make up entrance conditions.

A student who has failed in any subject (not including physical education and military art) in any term shall not be allowed the next following term to carry more than the normal number of hours required in his course.

The dean of the college in which a student is enrolled may at his discretion limit the number of hours that the student shall be allowed to carry.

A student may enroll in two classes when a conflict occurs only by permission of the dean of the college and of the heads of the departments concerned. In no such case shall a student be allowed to lose more than one-third of the time devoted to recitation in either class. The student shall be charged with all absences incurred through such conflict.

#### GRADING AND EXAMINATIONS

The following grading system went into effect September 1, 1916: A, B, C, D (passing grades), E (conditional failure), F (absolute failure). A student receiving a grade of "E" may remove it by an examination. A student receiving a grade of "F" shall not receive credit for the course except by repeating it in class. A student receiving a grade of "D" in any subject shall have an opportunity to raise this grade by passing an examination. Should he elect to take such examination, the grade made upon the examination shall become a part of his permanent record in place of the first grade made.

Examinations to raise the grade "D," or to remove the grade "E," shall be given on Monday and Tuesday of registration week in the student's next succeeding college year. In the case of seniors applying for graduation, a re-examination either to remove the grade "E" or to raise the grade "D" may be given in the same year prior to commencement at a time set by the Examiner.

Seniors applying for graduation and carrying the requisite work to entitle them to graduation, may, upon the recommendation of the instructors concerned, be excused from final examinations in each course in which their grade is as high as "B." Notices of exemption are sent by the Examiner near the end of the term.

If for any reason a student drops a course after the sixth week of the term, and if the student's work during the time that he attended the course was below the grade of "D," there shall be entered on his record a grade of "F" in that course; if "D" or above, he shall be marked "Excused" in that course.

In a "model" class (one in which all qualities of work are represented), the following scale of percentages in the different grades may be taken as an approximate:

- A, not more than ten per cent;
- B, not more than twenty per cent;
- C, from forty to fifty per cent;
- D, approximately twenty per cent;
- E and F combined, not more than ten per cent.

#### REQUIREMENTS FOR GRADUATION

No student shall be graduated from any division of the University who has a failing grade on his record which has not been satisfactorily repeated in class, removed by examination, or excused by the faculty of the college concerned.

No student shall be allowed to graduate from any division of the University if more than twenty-five per cent of his work is of the "D" grade.

In addition to completing the prescribed course of study, candidates for a degree are required to do at least the work of the senior year in residence.

## COLLEGE OF ARTS AND SCIENCES

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The object of the courses offered in the College of Arts and Sciences is to cover the broad field of general university study, including ancient and modern languages and literature, history and the social sciences, mathematics, the natural sciences, and the fine arts. It aims to afford the student an opportunity to gain a broad, cultural education, as well as to equip himself for further study in more technical fields.

### ADMISSION

For a detailed statement of the entrance requirements and a description of the subjects accepted for entrance see page 27.

### GRADE POINTS

Grade points are awarded on the following basis:

For grade A, 6 points for each hour.

For grade B, 4 points for each hour.

For grade C, 2 points for each hour.

For grade D, credit, but no points.

For grade E, 1 negative point for each hour.

For grade F, 2 negative points for each hour.

Twice as many points will be required for graduation as term hours of credit. If additional work is required for any cause, additional grade points will be necessary at the rate of two points for each term hour.

No change in grade points will be allowed unless the subject be repeated in class.

In case of exemption from final examination, grade points will be granted as for grade of "B".

### COURSES OF STUDY

The College of Arts and Sciences offers four-year courses leading to the degree of *Bachelor of Arts* (B. A.), and *Bachelor of Science in Chemistry* (B. S. C.); a graduate course leading to the degree of *Master of Arts*; and special courses in music leading to a certificate or diploma.

Candidates for the degree of Bachelor of Arts, who wish to teach in the schools of any state which requires professional preparation of its teachers, should take as part of their elective work the courses mentioned on page 118. They will then receive both the degree of Bachelor of Arts, and the teachers' certificate which will entitle them to teach in any school in the state without being required to pass examinations for a teacher's license.

### *REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS*

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily at least two hundred one term hours in approved courses, to be chosen with the following restrictions.

1. Prescribed courses as follows: English 141 (142) (143), nine hours; Military Art, nine hours (for men), or Physical Education, six hours (for women).

2. Elective courses to be chosen from the following group, with the restrictions noted below:

Group 1: English, French, German, Greek, Italian, Latin and Spanish.

Group 2. Astronomy, Biology, Chemistry, Geology, Mathematics and Physics.

Group 3. Economics, Education, History, Home Economics, Philosophy, Political Science and Sociology.

Group 4. Agriculture, Engineering, Fine Arts, Law, Medicine and Stenography.

a. The candidate may elect not more than sixty hours in any one subject, and not more than one hundred twenty hours from any one group. At least twenty-seven hours must be elected from each of groups 1, 2 and 3, (provided that at least twenty-seven hours exclusive of any course or courses offered from the College of Education must be elected from group 3), and not more than twenty-seven may be elected from group 4. A maximum of thirty-six term hours may be offered from the College of Education toward the degree of Bachelor of Arts.

b. The candidate must select, not earlier than the beginning of his sophomore year, and not later than the beginning of his junior year, one major subject, to be chosen from group 1, 2 or 3, in which he must complete not less than forty-five hours, and two minor subjects, in which he must complete not less than

twenty-seven and eighteen hours, respectively, subject to the approval of the candidate's major professor and the dean of the college. A description of the major requirements of each department will be found under the departmental statements.

c. The candidate selecting Home Economics, group 3, as the major subject, must complete not less than forty-five hours, nor more than forty-eight hours of the major subject. Eight additional hours, to be taken in Psychology, not in Education, may be taken in the College of Education, but no more, for such major students.

d. The candidate will be required to complete, in the combined high school and college courses, at least thirty hours of one foreign language, at least nine hours of which must be taken in college classes. In computing the total, each unit of high school work shall count as equivalent to six hours of college work. The student shall continue his language study until his requirement is satisfied, which in case of a modern language means a satisfactory working knowledge of that language.

e. The candidate must conform as closely as possible to the following schedule in the distribution of his work.

### *Freshman Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 141, 142, 143.....	4	4	4
Military Art 111, 112, 113, (or)			
Physical Education 111, 112, 113.....	1	1	1
*Elective .....	11	11	11
	16	16	16

### *Sophomore Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Military Art 221, 222, 223, (or)			
Physical Education 211, 212, 213.....	1	1	1
*Elective .....	16	16	16
	17	17	17

### *Junior Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
*Elective .....	17	17	17

*Senior Year*

## CREDIT HOURS

	FALL TERM	WINTER TERM	SPRING TERM
*Elective .....	17	17	17

\*To be chosen with the advice and consent of the candidate's major professor so as to meet the group requirements outlined above.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

The candidate must meet the entrance, residence, and registration requirements and must complete at least two hundred and four credit hours in approved courses as prescribed below:

*Freshman Year*

## CREDIT HOURS

	FALL TERM	WINTER TERM	SPRING TERM
Chemistry 141, 142, 143.....	4	4	4
Physics 141, 142, 143.....	4	4	4
English 131, 132, 133.....	3	3	3
Mathematics 154, 155, 156.....	5	5	5
Military Art 111, 112, 113.....	1	1	1
	17	17	17

*Sophomore Year*

## CREDIT HOURS

	FALL TERM	WINTER TERM	SPRING TERM
Chemistry 251, 254, 255.....	5	5	5
Physics 244, 245, 246.....	4	4	4
Mathematics 234, 235, 236.....	3	3	3
†German 131, 132, 133.....	3	3	3
Military Art 221, 222, 223.....	1	1	1
Elective .....	1	1	1
	17	17	17

*Junior Year*

## CREDIT HOURS

	FALL TERM	WINTER TERM	SPRING TERM
Chemistry 354, 355, 359.....	5	5	5
Biology 141, 142, 143.....	4	4	4
†German 231, 232, 233.....	3	3	3
*Elective .....	5	5	5
	17	17	17



*Senior Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Chemistry 434, 435, 436.....	3	3	3
Chemistry 451, 452.....	5	5	
Geology 141, 142, 143.....	4	4	4
*Elective .....	5	5	10
	17	17	17

\*To be chosen with the advice and consent of the candidate's major professor.

†Another foreign language may be substituted.

### REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

The degree of Master of Arts is granted for graduate work based upon an undergraduate course of four years, with the degree of *Bachelor of Arts*, completed at this University, or another college or university of equal standing. Before a student may become a candidate for the degree, however, his petition for admission to graduate standing must have the approval of the Senate Committee on Graduate Study and the dean of the college.

1. The minimum time in which a candidate may be permitted to complete the degree is one academic year. In individual cases, where the committee deems it necessary, more than one year may be required.

2. The candidate is required to complete one major subject and not more than two minor subjects in closely related courses. The major subject, including, with the thesis, at least twenty-four credit hours, must be one in which the candidate has received credit in his undergraduate course for at least thirty-six credit hours. The minor subjects, occupying together eighteen credit hours, must be the ones in which he has received credit in his undergraduate course for at least eighteen credit hours each. The choice of the candidate's major and minors is subject to the approval of the committee, the dean of the college, and the major professor.

3. Forty-two of the forty-eight hours required of the candidate must be regular class-room work. Candidates who are graduates of this University may pursue one half of the required work by correspondence, provided that their undergraduate records are satisfactory to the committee and to the dean of the college.

4. A student may be admitted to graduate standing without becoming a candidate for a degree by permission of the committee and the dean of the college.

### *SPECIAL COURSES IN THE DEPARTMENT OF FINE ARTS*

The department of Fine Arts offers special courses, the completion of which is attested to by a diploma or certificate. The purpose of these courses is to give opportunity to persons who do not desire to become candidates for a degree, but who wish to do special work in music, together with a small amount of work in courses of a general cultural nature, in preparation for teaching, or as a basis for further study.

Candidates for a certificate in piano or voice must meet the residence and registration requirements and must complete satisfactorily the following course of study.

#### *First Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Theory of Music 111, 112, 113.....	3	3	3
Theory of Music 114, 115, 116.....	3	3	3
Theory of Music 117, 118, 119.....	3	3	3
*Piano, Violin or Voice.....	1	1	1
Physical Education 111, 112, 113.....	1	1	1
Psychology 140, 141, 142.....	4	4	4

#### *Second Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Theory of Music 211, 212, 213.....	3	3	3
*Piano, Violin or Voice.....			

\*In instrumental and vocal music no definite number of hours can be stated; the applicant must show the attainment of sufficient knowledge, technique, and ability before a certificate will be granted.

Candidates for a diploma in music must meet the entrance, residence and registration requirements, and must complete satisfactorily the following courses of study. Students who receive this diploma must show evidence of four years of college training in music.

*First Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 141, 142, 143.....	4	4	4
Foreign Language .....	3-5	3-5	3-5
History or Economics .....	3-5	3-5	3-5
Theory of Music 111, 112, 113.....	1	1	1
Theory of Music 114, 115, 116.....	1	1	1
Theory of Music 117, 118, 119.....	1	1	1
*Piano, Violin or Voice.....	1	1	1
Physical Education 111, 112, 113.....	1	1	1
Psychology 140, 141, 142.....	4	4	4
	15	15	15

*Second Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 542, 543, 544.....	4	4	4
Foreign Language .....	3-5	3-5	3-5
Theory of Music 211, 212, 213.....	1	1	1
*Piano, Violin or Voice.....	1	1	1
Physical Education 211, 212, 213.....	1	1	1
	17	17	17

\*In instrumental and vocal music no definite number of hours can be stated; the applicant must show the attainment of sufficient knowledge, technique, and ability before a diploma will be granted. In general, this will require from four to six years of study. In addition to the study of the major instrument the candidate will be required to spend at least one year in the study of some other instrument or of voice subject to the approval of the head of the department.

## DEPARTMENTAL STATEMENTS

## SYMBOLS

The numbers of courses which are taken to remedy entrance deficiencies contain two digits only, the first of which shows the number of hours of credit per week and the second distinguishes the course.

The numbers of the regular college courses contain three digits: the first indicates the college year, the second, the number of hours of credit per week; the third, the particular course.

These numbers are distributed as follows:

101 to 199—Courses which are open to freshmen.

201 to 299—Courses which are required of Sophomores in one or more of the colleges, or elective for sophomores, juniors or seniors.

301 to 399—Courses which are required of juniors in one or more of the colleges, or elective for juniors and seniors.

401 to 499—Courses which are required of seniors in one or more of the colleges, or elective for seniors.

501 up —Open electives for sophomores, juniors and seniors.

Courses with double or triple numbers, as English 131 (132) (133) run through two or three terms, respectively, and credit will not be allowed until the final term's work is completed.

Courses indicated by a star (\*) may be elected by graduate students for credit towards an advanced degree.

#### CREDIT HOURS

The number of term credit hours allowed in each course is identical with the number of hours per week spent upon that course except that in the laboratory, shop, or field work two to three hours will be considered equivalent to one hour of lecture or recitation.

### ANCIENT LANGUAGES

PROFESSOR STRAUSS, ASSISTANT PROFESSOR HANCOCK

*Requirements for a Major in Latin or ancient languages*, forty-five credit hours. Students who expect to teach Latin in secondary schools should complete courses 147, 148, 149 and at least nine hours of more advanced work.

#### COURSES

##### Latin

No.	Title	Credit	Prerequisites
111 (112)	Latin and Greek		
	Word-Roots in English.....	2	†
131 (132) (133)	Cicero's Speeches and Letters.....	9	†
134 (135) (136)	Vergil's Aeneid .....	9	†
114 (115) (116)	Elementary Latin Composition.....	3	†
147	Cicero's Essays .....	4	†
148	Selection from Livy .....	4	†
149	Latin Comedy .....	4	†
531	Cicero's Letters .....	3	147-9
532	Juvenal and Martial.....	3	147-9
533	Pliny's Letters .....	3	147-9
511 (512) (513)	Advanced Latin Composition .....	3	147-9
514 (515) (516)	Late Latin .....	3	†
534 (535) (536)	Roman Poetry .....	9	531-3
537	History of Roman Literature .....	3	†
538	Greek and Roman Mythology .....	3	†
539	Roman Private Life.....	3	†

<b>Greek</b>			
131 (132)	Elementary Greek .....	6	None
143	Xenophon .....	4	131-2
543 (544)	Greek Literature in Translation.....	8(or 4) †	

†See Statement.

## LATIN

111, (112). **LATIN AND GREEK WORD-ROOTS IN ENGLISH.**—This course requires no knowledge of the Greek language and but one year of Latin. Gives a working knowledge of the common roots used in the formation of English words, both technical and general. Designed especially for students of science who do not continue their Latin. One hour a week.

ASSISTANT PROFESSOR HANCOCK.

131 (132) (133). **CICERO'S SPEECHES AND LETTERS.**—Six speeches and selections from the letters; a review of forms and syntax; an introduction to the use of good English in translation. For students who offer only two units of Latin for entrance. Three hours a week. See course 114 (115) (116).

PROFESSOR STRAUSS.

114 (115) (116). **ELEMENTARY LATIN COMPOSITION**—Required of all students taking 131 and of those taking 134 who have had no equivalent course. One hour a week.

PROFESSOR STRAUSS.

134 (135) (136). **VERGIL'S AENEID**—Due attention will be given to forms, syntax, and prosody, but the chief aim will be to enable the student to arrive at an appreciation of the poem as literature. For students who offer three units of Latin for entrance. Three hours a week. See course 114 (115) (116).

ASSISTANT PROFESSOR HANCOCK.

147 **CICERO'S ESSAYS.**—A study of the *De Amicitia*, with a thorough review of forms and syntax at the beginning of the course.

148. **LIVY.**—Selections from Livy, Books XXI-XXII.

149. **LATIN COMEDY.**—The *Phormio* of Terence.

These courses, in any order, are open to those who have had four units of Latin. Four hours a week.

PROFESSOR STRAUSS.

ASSISTANT PROFESSOR HANCOCK.

531. **CICERO.**—Selections from the Letters.

PROFESSOR STRAUSS.

532. JUVENAL AND MARTIAL.—Juvenal's Satires; Martial's Epigrams.

ASSISTANT PROFESSOR HANCOCK.

533. PLINY.—Selections from the Letters.

ASSISTANT PROFESSOR HANCOCK.

The incidental object of courses 531-533 is to acquaint the student with Roman public and private life. Three hours a week.

511 (512) (513). ADVANCED LATIN COMPOSITION.—Translation of English narrative and study of Latin idioms. This course is essential to students who are preparing to teach Latin. One hour a week.

PROFESSOR STRAUSS.

534 (535) (536). ROMAN POETRY.—Reading of selections from Roman poets. An attempt will be made to secure for the student a good general view of the whole field of Roman poetry. Three hours a week.

PROFESSOR STRAUSS.

537. HISTORY OF ROMAN LITERATURE.—Mackail's Latin Literature, supplemented by lectures and assigned reading in English translations of the more important authors. Three hours a week.

PROFESSOR STRAUSS.

538. GREEK AND ROMAN MYTHOLOGY; ITS USE IN ENGLISH LITERATURE.—A systematic literary study of the myths that underlie all literature. Each student will follow a particular myth through English literature. Those having a knowledge of Latin will be given Latin sources to investigate. Three hours a week.

PROFESSOR STRAUSS.

539. ROMAN PRIVATE LIFE.—Johnston's Private Life of the Romans. Lectures illustrated by stereopticon and supplemented by collateral reading and reports. Three hours a week.

NOTE.—Courses 537, 538, 539 presuppose no knowledge of Latin.

514 (515) (516). LATE LATIN.—The object of this course is to give some connection between Latin and the Romance languages. Open to students who present two entrance units of Latin and who have had not less than the equivalent of a full year in college of one Romance language. One hour a week.

PROFESSOR STRAUSS.



## GREEK

131 (132). **ELEMENTARY GREEK.**—Assuming on the part of the student a fair knowledge of Latin Grammar, the essentials of Greek form and syntax are given rapidly, with much illustrative reading and comparatively little drill. A course designed for students who offer no Greek for entrance and who wish to begin a study of the language. Three hours a week.

ASSISTANT PROFESSOR HANCOCK.

143. **XENOPHON**—Selections from *Anabasis*, *Cyropedia*, and *Memorabilia*; practical review of syntax, some prose composition and sight reading. Four hours a week.

ASSISTANT PROFESSOR HANCOCK.

543 (544). **GREEK LITERATURE IN TRANSLATION.**—The aim of this course is to give students of any literature a knowledge of the form and content of the literature that has influenced most widely all others. In the first quarter epic and lyric poetry will be studied; in the second, prose and drama. Lectures, class reading, collateral reading, and frequent tests. Four hours a week.

ASSISTANT PROFESSOR HANCOCK.

PROFESSOR STRAUSS.

## BOTANY

PROFESSOR BUCHHOLZ.

*Requirements for a major in Botany*, forty-five credit hours which must include courses 141, 142, 143, 243, 244, 245, 242 and Plant Pathology 452. Bacteriology 351 may be included.

## COURSES

No.	Title	Credit	Prerequisites
141	Elementary Botany	4	None
142	Elementary Botany	4	None
143	Elementary Botany	4	None
540	Nature Study	4	None
*243	Morphology of Fungi	4	141, 142, 143
*244	Morphology of Bryophytes and Pteridophytes	4	141, 142, 143
*245	Morphology of Spermatophytes	4	141, 142, 143
551	Plant Microtechnique	5	141, 142, 143
*552	Systematic Botany	5	141, 142, 143
242	Plant Physiology	4	141, 142, 143
341	Genetics	4	141, 142, 143
*553	Cytology	5	141, 142, 143, 244, 245

141. **ELEMENTARY BOTANY.**—An introductory course dealing with the fundamental structures and physiological processes of higher plants, with special reference to the nature of economic plants. A consideration of bacteria and a few other types of microscopic plants. Elective for Art students; required of all Agricultural students. Lectures and recitations two hours, laboratory practice four hours a week. Fall term.

PROFESSOR BUCHHOLZ

142. **ELEMENTARY BOTANY.**—A continuation of course 141. Presenting the life histories of the great groups of plants in the order of their evolution, affording at the same time a brief general survey of the plant kingdom from the lowest forms to the highest. Special emphasis will be placed on the disease producing fungi. Elective for Arts students; required of all Agricultural students. Lectures and recitations two hours, laboratory practice, four hours per week. Winter term.

PROFESSOR BUCHHOLZ

143. **ELEMENTARY BOTANY.**—Conclusion of course 142, merging into a systematic course in the classification of seed plants. Field trips are taken on Saturdays, or during afternoons as part of the laboratory work, for a study of the local flora. Lectures and recitations, two hours, laboratory practice four hours per week.

PROFESSOR BUCHHOLZ

540. **NATURE STUDY, PLANT AND ANIMAL LIFE.**—A presentation of the biological subject matter of nature study courses, with emphasis on the material suitable for use in the public schools. Life histories and habits of insects, birds, and other animals, habitat studies of common plants, gross anatomy of flower parts, identification of trees and interdependence of plant and animal life. The principal object of this course is to awaken an interest and appreciation of surroundings. Lectures two hours, field and laboratory studies four hours per week, with field trips on Saturdays. Spring term.

PROFESSOR BUCHHOLZ

243. **MORPHOLOGY OF THALLOPHYTES.**—A detailed morphological treatment of the Thallophytes by groups, with emphasis on the fresh water algae and the fungi. Lectures two hours, laboratory practice, four hours per week. Fall term.

PROFESSOR BUCHHOLZ.

244. **MORPHOLOGY OF BRYOPHYTES AND PTERIDOPHYTES.**—The Bryophytes and Pteridophytes are studied with reference to the important morphological details of their life histories and evolution. The study of the Pteridophytes includes the study of

vascular anatomy. Lectures two hours, laboratory practice four hours per week. Winter term.

PROFESSOR BUCHHOLZ

245. MORPHOLOGY OF SPERMATOPHYTES.—The details of the morphology of seed plants, in relation to their evolutionary history. In reality a continuation of course 244, since all vascular plants constitute a natural group. Lectures two hours, laboratory practice four hours a week.

PROFESSOR BUCHHOLZ

551 or 541. PLANT MICROTECHNIQUE.—Practice in the various methods of preparing plant material for microscopic examination. Laboratory practice eight hours per week (course 541), or ten hours per week (course 551). Winter term.

PROFESSOR BUCHHOLZ

552. SYSTEMATIC BOTANY.—The identification and classification of wild and cultivated plants in the vicinity of Fayetteville. The field work will include ecological studies, and attention might be called to the fact that the Ozark region is especially fine for a course of this character. Correlation of the groups from an evolutionary standpoint is also attempted. Lecture one hour, laboratory practice eight hours per week. Field trips afternoons or Saturdays.

PROFESSOR BUCHHOLZ.

242. PLANT PHYSIOLOGY.—The student performs a series of experiments on plants which are designed to make clear to him in both qualitative and quantitative sense the salient functions. Laboratory practice eight hours a week. Fall term.

PROFESSOR BUCHHOLZ

341. GENETICS.—The presentation of the facts of inheritance and the theories dealing with these facts. Attention is also given to the hypotheses concerned with the problems of evolution. Required of junior Agricultural students; elective for Arts students. Lectures and recitations three hours, laboratory practice two hours a week. Winter term.

PROFESSOR BUCHHOLZ

553. CYTOLOGY.—Presenting the facts concerning the cell and the behavior of its component parts during division. The theories attempting to correlate the facts of Mendelian inheritance with cell conditions. Lectures and recitations two hours, laboratory practice six hours a week. Spring term.

PROFESSOR BUCHHOLZ

## CHEMISTRY

PROFESSOR HALE, ASSOCIATE PROFESSOR MORROW, MR. TRIMBLE,  
\*MR. HUMPHREYS.

The courses in chemistry are planned to meet the needs of students who (1) wish the science for its cultural value, (2) need it as a foundation for work in other sciences, (3) are majoring in chemistry or studying chemical engineering.

*Requirements for a Major in Chemistry.* forty-five term hours which should include courses 141 (142) (143) 251, 255, 354, and (355).

The department of chemistry offers a special course leading to the degree of Bachelor of Science in Chemistry (see page 52), which may be pursued as a preparation for the study of medicine, or for technical work in chemistry, or as a basis for graduate study in chemistry. In conjunction with the College of Engineering, there is also offered a course leading to a degree of Bachelor of Chemical Engineering.

\*Absent on leave.

## COURSES

No.	Title	Credit	Prerequisites
141 (142) (143)	General Chemistry .....	12	None
144 (145)	General Chemistry .....	8	High School Chem.
242	Elementary Organic Chemistry .....	4	143
251, 241	Qualitative Analysis.....	5 or 4	143
232	Advanced Qualitative Analysis .....	3	251 or 241
254, 244	Quantitative Analysis.....	5 or 4	251 or 241
255	Advanced Quantitative Analysis .....	5	254
247	Food Analysis .....	4	251 or 241
354 (355)	Organic Chemistry .....	10	251 or 241
356	Elementary Biological Chemistry .....	5	355
359	Industrial Chemistry .....	5	254, 354
*451 (452)	Physical Chemistry .....	10	255, Physics 143
*453	Electro-Chemistry .....	5	452
*434	History of Chemistry .....	3	254, 354
*435 (436)	Advanced Inorganic Chemistry .....	6	254, 354
*437 (438)	Advanced Organic Chemistry .....	6	355
521	American Chemistry .....	2	143
*522, 523	Inorganic Preparations .....	4	254
*524, 525	Organic Preparations .....	4	355
533	Metallurgy .....	3	251 or 241
631-639	Special Methods in Quantitative Analysis .....	†	251 or 241
*831	Research .....	†	
806	Journal Meetings .....	†	

\*See page 56.

†See statement

141 (142) (143). GENERAL CHEMISTRY.—An elementary course with a two-fold object: First, to give the student a thorough general knowledge of the principles of chemistry; secondly, to make chemistry a subject of interest and value, touching closely everyday life. Lectures, demonstrations and recitations three hours, laboratory three hours a week.

PROFESSOR HALE, ASSOCIATE PROFESSOR MORROW AND ASSISTANTS.

144 (145). GENERAL CHEMISTRY.—The same as the above course, but adapted to the needs of students offering an admission unit in chemistry.

PROFESSOR HALE, ASSOCIATE PROFESSOR MORROW AND ASSISTANTS.

242. ELEMENTARY ORGANIC CHEMISTRY.—An introductory course designed especially for students in Home Economics and Agriculture. Lectures and recitations three hours, laboratory three hours a week.

ASSOCIATE PROFESSOR MORROW.

251, 241. QUALITATIVE ANALYSIS.—A practical course in qualitative analysis with lectures dealing with the theories involved. Lectures and recitations two hours, laboratory nine or six hours a week.

MR. TRIMBLE.

232. ADVANCED QUALITATIVE ANALYSIS.—A continuation of 251 with lecture and recitation one hour, laboratory six hours a week.

MR. TRIMBLE.

254, 244. QUANTITATIVE ANALYSIS.—Lectures on the theory and practice of the subject, the most important gravimetric and volumetric methods being studied. Lectures and recitations two hours, laboratory nine or six hours a week.

MR. TRIMBLE.

255. ADVANCED QUANTITATIVE ANALYSIS.—A continuation of 254 with similar hours.

MR. TRIMBLE.

247. FOOD ANALYSIS.—A study of the general methods of Quantitative Analysis with special reference to foods, arranged for students in Home Economics. Lectures and recitations two hours, laboratory six hours a week.

MR. HUMPHREYS.

354 (355). ORGANIC CHEMISTRY.—A study of the fundamental principles of organic chemistry with laboratory work illustrating

these. Lectures and recitations three hours, laboratory six hours a week.

ASSOCIATE PROFESSOR MORROW.

356. **ELEMENTARY BIOLOGICAL CHEMISTRY.**—A general course designed for pre-medical students as preparation for their physiological and pathological chemical work; and as an elective for students in agriculture, home economics and biology. Lectures three hours, laboratory six hours a week.

ASSOCIATE PROFESSOR MORROW.

359. **INDUSTRIAL CHEMISTRY.**—A study of the practical application of chemistry to industry, special attention being given to actual or possible manufacturing establishments in this state. One or more inspection trips are taken. Lectures and recitations five hours a week.

PROFESSOR HALE

451 (452). **PHYSICAL CHEMISTRY.**—The general principles of natural science with especial reference to the principles, theories and generalizations of chemistry. The method of attacking a problem, the apparatus used, and a study of certain fundamental principles are covered in the laboratory work. Lectures and recitations three hours, laboratory six hours a week.

MR. TRIMBLE.

453. **ELECTRO-CHEMISTRY.**—The relation of chemical to electrical energy, transformations from one form of energy to the other, certain electro-physical phenomena and industrial applications. Lectures and recitations three hours, laboratory six hours a week.

MR. TRIMBLE.

434. **HISTORY OF CHEMISTRY.**—The development of chemistry, intended to furnish a helpful basis for the present day science. Lectures and recitations three hours a week.

PROFESSOR HALE

435 (436). **ADVANCED INORGANIC CHEMISTRY.**—The underlying facts and principles are studied in some detail. Lectures and recitations three hours a week.

PROFESSOR HALE

437 (438). **ADVANCED ORGANIC CHEMISTRY.**—A more thorough study for advanced students. Lectures and recitations three hours a week.

ASSOCIATE PROFESSOR MORROW.

521. **AMERICAN CHEMISTRY.**—The fundamental importance of chemistry in our modern life and of the real contribution the



United States has made and is making to it. A non-technical course, intended to be of general cultural value. Lectures and recitations, two hours a week.

PROFESSOR HALE

522, 523. INORGANIC PREPARATIONS.—Chiefly laboratory work, with an insistence upon the principles and economic value of the process. Six hours a week.

PROFESSOR HALE

524, 525. ORGANIC PREPARATIONS.—Similar to 522, 523.

ASSOCIATE PROFESSOR MORROW.

533. METALLURGY.—A practical course with lectures and recitations two hours, laboratory three hours a week.

MR. TRIMBLE.

631-639. SPECIAL METHODS IN QUANTITATIVE ANALYSIS.—Sanitary Water Analysis, Electro-Analysis, Ultimate Organic Analysis, Coal and Coke Analysis, Analysis of Road Materials, Analysis of Certain Rocks, Gas Analysis, etc. Chiefly laboratory practice, nine hours a week, including conferences. The amount of credit is to be arranged with the individual student before he registers for the course.

PROFESSOR HALE

MR. TRIMBLE.

831. RESEARCH.—Problems in research will be given to graduates or others who are considered capable of successfully attacking them. Credit will vary in accordance with the amount of work done.

PROFESSOR HALE

806. JOURNAL MEETINGS.—Members of the faculty, graduates, and advanced students will meet at certain times for the discussion of articles in the current chemical literature.

PROFESSOR HALE

## ECONOMICS AND SOCIOLOGY

PROFESSOR STEWART, MR. WATERMAN, MR. WATTS.

This department offers instruction in economic principles in relation to individuals, particular branches of business, and the public welfare.

*Requirements for a Major in Economics*, forty-five credit hours, including courses 540, 541, 520, 521, 641, and 642, or their equivalent. Students in the College of Education preparing to teach commercial subjects may complete a major in this

department with courses 540, 541, 520, 521, 549, 630, 631, 632, 633, 835, 935 and three hours of elective.

## COURSES

No.	Title	Credit	Prerequisite
540	Principles of Economics.....	4	None
541	Principles of Economics, concluded.....	4	540
542	Transportation .....	4	None
520	Business Organization and Management .....	2	None
521	Business Organization and Management, concl. .....	2	520
543	Money and the Price System.....	4	540, 541 or 520, 521
544	Capital and Credit Institutions .....	4	540, 541 or 520, 521
545	Business Statistics .....	4	540, 541
*530	Labor Organization and Legislation.....	3	540, 541
547	Principles of Sociology.....	4	None
548	Problems in Social Betterment .....	4	None
531	Insurance .....	3	540, 541
522	Domestic Commerce .....	2	540, 541 or 520, 521
523	Foreign Commerce .....	2	540, 541 or 520, 521
546	Banking Principles and Practices .....	4	543 or 544
*532	Socialism .....	3	540, 541
533	Government Regulation of Industry .....	3	540, 541 or 520, 521
430	Principles of Agricultural Economics .....	3	None
*431	Agricultural Selling and Buying .....	3	431 or 540, 541
*432	Rural Institutions and Welfare .....	3	None
549	Business Finance and Investments .....	4	540, 541 or 520, 521
640	Public Finance .....	4	540, 541
*641	Economic History of the United States .....	4	540, 541
*642	Current Economic Problems.....	4	540, 541
740	(741) Business Law .....	8	None
433	Business Law (Engineers only).....	3	None
730	(731) Elementary Accounting .....	6	None
732	(733) Advanced Accounting .....	6	730, 731
734	Auditing .....	3	732, 733
440	Farm Accounting .....	4	None
434	Senior Economic Seminar.....	3	†
†340	Elementary Economics .....	4	†
†130	(131) Shorthand .....	2	None
†132	(133) Typewriting .....	0	None
†122	(123) Typewriting .....	0	None

†See statement.

\*See page 56.

NOTE.—Freshmen whose high school preparation has been good may be admitted to courses numbered 520 and upward upon consent of the head of the department.

540 (541). PRINCIPLES OF ECONOMICS.—The fundamentals of economic science and a preliminary survey of economic relations as organized by private interests and public agencies. Four hours a week.

PROFESSOR STEWART,  
MR. WATERMAN.

542. TRANSPORTATION.—Transportation facilities as determinants of market situations; the economics of the good roads

movement; the cost and service of inland waterways, steam and electric railways; ocean ports and carriers. Four hours a week.

MR. WATERMAN.

520. BUSINESS ORGANIZATION AND MANAGEMENT.—Individual proprietorship, partnership and cooperation; the process of organizing a business; the economic reasons for growth of trusts and other types of large business organizations. Two hours a week.

MR. WATERMAN.

521. BUSINESS ORGANIZATION AND MANAGEMENT.—Organization for operation and the reaction of forms of organization on efficiency; gradation and interrelation of divisions and departments; departmental responsibility and authority; scientific management as a factor in operating efficiency. Two hours a week.

MR. WATERMAN.

543. MONEY AND THE PRICE SYSTEM.—The relation of value to price; the price-making process, barter and the evolution of money; development of the system of metallic and paper currency now in use in the United States; pecuniary organization and the business cycle. Four hours a week.

PROFESSOR STEWART.

544. CAPITAL AND ITS INSTITUTIONS.—The function of capital goods in the productive process; capital accumulation and the rate of interest; banks, security brokers, and other agencies for the mobilization of capital; the nature and functions of credit. Four hours a week.

PROFESSOR STEWART.

545. BUSINESS STATISTICS. Sources of statistical data; purposes of statistics; preparation of schedules; analysis of returns; methods of computing averages and index numbers; construction and use of frequency tables; graphic methods and their uses; limitations of statistics; application of statistical methods to current problems. Four hours a week.

PROFESSOR STEWART.

530. LABOR ORGANIZATION AND LEGISLATION.—Origin and development of labor organizations, strikes and boycotts, arbitration, conciliation, and government control; the problem of woman and child labor, profit-sharing and co-operation, and the minimum wage; unemployment and the insecurity of the worker's position. Three hours a week.

MR. WATERMAN.

547. **ELEMENTARY SOCIOLOGY.**—The antiquity of man; folkways and primitive customs; the origin of modern institutions; classification of social activities; social control of individual conduct; the various theories of social progress. Four hours a week.

MR. WATERMAN.

548. **PROBLEMS IN SOCIAL BETTERMENT.**—An examination into the nature, causes, and treatment of selected social problems, discussed in the light of modern sociological theory. Four hours a week.

MR. WATERMAN.

531. **INSURANCE.**—The economic functions of insurance, types of life policies, methods of rate-making, agency and investment; fire and other forms of property insurance; the problem of government regulation; social insurance. Three hours a week.

MR. WATERMAN.

522. **DOMESTIC COMMERCE.**—The economic conditions which lead to the development of domestic trade; wholesale and retail trade organizations; markets, fairs, auctions, stock and produce exchanges; department, mail-order, and cooperative stores; commercial travelers; commercial competition; modern advertising; mercantile credit. Two hours a week.

MR. WATERMAN.

523. **FOREIGN COMMERCE.**—Historic trade routes and centers; tariffs and trade policies; exporting and importing; ocean transportation; line and charter traffic; institutions for promoting export trade; the consular service; entry of goods; the work of the custom house. Two hours a week.

MR. WATERMAN.

546. **BANKING PRINCIPLES AND PRACTICES.**—National banks and the Federal Reserve system; state banking system (with special reference to Arkansas); trust companies and private bankers; a practical study of organization and operation. Four hours a week.

PROFESSOR STEWART.

532. **SOCIALISM.**—The historical background of socialism, the work of Marx and various modern schools of socialistic thought; socialism, as a criticism of classical political economy and existing institutions, as a theory of social evolution, and as a program of social reform. Three hours a week.

MR. WATERMAN.

533. **GOVERNMENT REGULATION OF INDUSTRIES.**—The problem created by the growth of large incorporated business; pools,

trusts, holding companies, gentlemen's agreements; the Sherman Act and subsequent state and federal legislation; government regulation of railways; the Federal Trade Commission and the recent enlargement of the field of government control. Three hours a week.

MR. WATERMAN.

430. PRINCIPLES OF AGRICULTURAL ECONOMICS.—The principles of economics as applied to the concrete problems of rural life; the problem of distribution as touching rents and values of farm lands, farm labor and wages, rates of interest and profits in agriculture. Three hours a week.

PROFESSOR STEWART.

431. AGRICULTURAL SELLING AND BUYING.—The practical problems of marketing, credits, labor hiring, purchase of land and supplies. Special attention is given to cooperative enterprise. Three hours a week.

PROFESSOR STEWART.

432. RURAL INSTITUTIONS AND WELFARE.—The problems of farm and village life in the light of economic science; the community features of rural life designed to give the economic, educational, and ethical accumulations of rural civilization permanent form. Three hours a week.

PROFESSOR STEWART.

549. BUSINESS FINANCE AND INVESTMENTS.—Organization of the corporation; the problem of proper capitalization; the financial plan, sale of securities, management of corporate income, receivership and reorganization; the investor's problem of ascertaining the earning power and value of bonds and stocks; suitability of various securities to different investment needs. Four hours a week.

MR. WATERMAN.

640. PUBLIC FINANCE.—The growth of public expenditures; purpose and methods of budget-making; sources of public revenue, systems of collection and administration; the problem of state and local taxation. Four hours a week.

PROFESSOR STEWART.

641. ECONOMIC HISTORY OF THE UNITED STATES.—The events of our history in the light of economic principles; the trend of past industrial development and the source of present conflicts. Four hours a week.

PROFESSOR STEWART.

642. CURRENT ECONOMIC PROBLEMS.—Using course 641 as a foundation, an attempt is made to analyze our present-day prob-

lems and to get down to the essential issues upon which modern industrial society divides. The significance of property rights, separation of economic classes, social control of industry, and the goal of economic effort. Four hours a week.

PROFESSOR STEWART.

740 (741). BUSINESS LAW.—The application of those phases of law that govern business transactions, such as contracts, agency, negotiable instruments, bailments, insurance, corporations and the transfer of real and personal property. Four hours a week.

MR. WATTS.

434. SENIOR ECONOMIC SEMINAR.—A course carrying a credit not to exceed three hours in the aggregate for work of an investigatory nature on a subject reported in thesis form.

PROFESSOR STEWART.

433. BUSINESS LAW.—For senior students in Engineering only. A condensation of course 740, 741. Three hours a week.

MR. WATTS.

730 (731). ELEMENTARY ACCOUNTING.—The theory and practice of double-entry bookkeeping illustrating the uses of the fundamental books, the interpretation and classification of accounts, preparation and analysis of statements. Class and laboratory work three hours a week.

MR. WATTS.

732 (733). ADVANCED ACCOUNTING.—Partnership and corporation accounts, treatment of goodwill, depreciation, profits, reserves; functions of the financial statement; statement of affairs, and realization and liquidation accounts. Class and laboratory work three hours a week.

MR. WATTS.

440. FARM ACCOUNTING.—Principles of accounting and cost finding applied to farming operations and its relation to farm management. Class work and written problems four hours a week.

MR. WATTS.

734. AUDITING.—Purpose and value of an audit; types of audits; method of making the detailed audit. Four hours a week.

MR. WATTS.

340. ELEMENTARY ECONOMICS.—A brief course for junior and senior students pursuing Smith-Hughes curriculums. Four hours a week. (*Given in alternate years; given in 1920-1921.*)



†130 (131). **SHORTHAND.**—Theory and practice of Gregg shorthand supplemented by speed study and practice. Three hours a week, for two terms. One hour credit per term.

MR. WATTS.

†132 (133). **TYPEWRITING.**—Mastery of the keyboard and time-saving devices of the standard typewriter by the touch system; care of the machine; speed practice and speed tests. One hour registration for each three hours of practice a week. No credit.

MR. WATTS.

†These courses are designed to help regular students of the University who may be called upon to teach or practice these arts incidentally to other teaching or business work. Students wishing to enroll only in shorthand, typewriting, and elementary accounting are advised to attend some institution specializing in non-university business training.

The College of Education grants credit for work in these courses to correspond to the registration hours.

## ENGLISH

PROFESSOR JONES, PROFESSOR JORDAN, PROFESSOR ADLER, ASSISTANT  
PROFESSOR HOLCOMBE, ASSISTANT PROFESSOR HASTINGS,  
MISS DAVIS, MR. VOTAW, MISS DICKEY

The aim of the courses in the department of English is (1) to train students to write English clearly and correctly, and (2) to teach them to understand and to appreciate the best in literature. Every course in composition, therefore, is accompanied by a considerable amount of required readings, and every course in literature requires a certain amount of written criticism.

*Requirements for a Major in English*, fifty-four term hours, including courses 141 (142) (143), [or 131 (132) (133)], 542 (543) [or 144 (145) (146)], 531 (532) or 547 or Public Speaking 533 (534), and two from the following three: 641 (642), 643, 644 (645). Students who expect to teach English in the secondary schools should complete at least forty-five term hours in English, with some credits in literature and some in language. Course 745 should be included.

## COURSES

## English

No.	Title	Credit	Prerequisites
§131 (132) (133)	Rhetoric and Composition .....	9	†
141 (142) (143)	Rhetoric and Composition.....	12	†
144 (145) (146)	Composition and Literature ....	12	†
231 (232) (233)	English Composition .....	9	†
331 (332) (333)	English Composition .....	9	141-3 or 144-6
531 (532)	Advanced Composition .....	6	141-3 or 144-6
542 (543)	English Literature in Outline ..	8	141-3
544	American Literature .....	4	141-3, 542-3 (or 144-6)
545	English Prose Fiction .....	4	141-3, 542-3 (or 144-6)
546	Contemporary Literature .....	4	141-3, 542-3 (or 144-6)
547	The Short Story .....	4	141-3, 542-3 (or 144-6)
*548	Eighteenth Century .....	4	141-3, 542-3 (or 144-6)
649	Contemporary Dramatists .....	4	141-3, 542-3 (or 144-6)
*641 (642)	Chaucer .....	8	†
*643	Anglo-Saxon .....	4	141-3, 542-3 (or 144-6)
*644 (645)	Shakespeare .....	8	141-3, 542-3 (or 144-6)
*646	The Elizabethan Drama .....	4	141-3, 542-3 (or 144-6)
647	Tennyson and Browning.....	4	141-3, 542-3 (or 144-6)
648	Lyric Poetry.....	4	141-3, 542-3 (or 144-6)
649	Contemporary Dramatics.....	4	141-3, 542-3 (or 144-6)
721 (722) (723)	Literature of the Bible.....	6	141-3, 542-3 (or 144-6)
741	Milton .....	4	141-3, 542-3 (or 144-6)
*742	Nineteenth Century Essayists ..	4	141-3, 542-3 (or 144-6)
*743	Literary Criticism.....	4	†
*744	Comparative Literature .....	4	†
745	The Teaching of English.....	4	†

## Public Speaking

533 (534)	Argumentation .....	6	141-3 or 144-6
535	Public Speaking .....	3	141-3 or 144-6
541	Intercollegiate Debate .....	4	†

## Journalism

101 (102) (103)	The American Newspaper.....	0	†
537 (538) (539)	Newspaper Writing.....	9	141-3 or 144-6
521 (522) (523)	Newspaper Editing .....	6	141-3 and 537-9

†See statement.

§Course 131 (132) (133) may be substituted for 141 (142) (143) as a prerequisite for advanced courses in English.

\*See page 56.

131 (132) (133). RHETORIC AND COMPOSITION.—Recitations, themes, conferences, and required reading three hours a week. The student is given some practice in argumentation, description, and narration, but the chief drill is in expository writing. *Required of all freshmen in the College of Education, who present at least three units in English for entrance.*

PROFESSORS JONES, JORDAN, AND ADLER,  
ASSISTANT PROFESSORS HOLCOMBE AND HASTINGS,  
MISS DAVIS.

141 (142) (143). RHETORIC AND COMPOSITION.—Four hours a week. *Required of all freshmen in the Colleges of Agriculture, Arts and Sciences, and Engineering, who present at least three units in English for entrance, except those who are admitted to English 144-6.*

PROFESSORS JONES AND JORDAN,  
ASSISTANT PROFESSORS HOLCOMBE AND HASTINGS,  
MISS DAVIS.

144 (145) (146). COMPOSITION AND LITERATURE.—This course corresponds, in part, to English 141-3 and is intended for those students who have had four years of English in the high school and who have shown marked proficiency in the subject. No student is admitted to this course without the consent of the instructor. About half of the time is devoted to a study of exposition and argumentation and the rest to a study of various types of literature. Four hours a week, three terms.

PROFESSOR JONES.

231 (232) (233). ENGLISH COMPOSITION.—This course is required of all students in the College of Arts and Sciences who do not make a grade higher than "D" in Freshman English. It consists largely of practice in writing and intensive drill in correct usage of spoken and written English.

331 (332) (333). ENGLISH COMPOSITION.—A course in technical writing, with some study of scientific and technical articles of various kinds. This course is open only to students in the Colleges of Agriculture and Engineering who have credit for English 141-3, or its equivalent. Lectures, recitations, and themes, three hours a week throughout the year.

PROFESSOR JONES.

531 (532). ADVANCED COMPOSITION.—The purpose of this course is to teach the principles of exposition and to develop the ability to write clear and vigorous prose. Themes, assigned readings, and conferences, three hours a week, two terms.

ASSISTANT PROFESSOR HOLCOMBE.

542 (543). ENGLISH LITERATURE IN OUTLINE.—A study of the life and the literature of the English people from Anglo-Saxon times to the close of the nineteenth century. Lectures, study of the works of representative authors, reports, and critical essays. Four hours a week, two terms.

PROFESSOR JORDAN.

ASSISTANT PROFESSORS HOLCOMBE AND HASTINGS.

544. AMERICAN LITERATURE.—Considerable stress is laid on Colonial and Revolutionary literature with readings and reports on material that the student has difficulty in finding for himself. A study is then made of Irving, Cooper, Bryant, Poe, Emerson, Lowell, Longfellow, Hawthorne, Whittier, Holmes, and Whitman, followed by a consideration of the minor poets of the South. Lectures and recitations, four hours a week, one term.

ASSISTANT PROFESSORS HOLCOMBE AND HASTINGS.

545. ENGLISH PROSE FICTION.—The course involves a study of various types of prose fiction from the romance of the sixteenth century to George Eliot. Lectures, readings, and critical reports, four hours a week, fall term.

ASSISTANT PROFESSOR HASTINGS.

546. CONTEMPORARY LITERATURE.—A study of recent and contemporary English and American poets and novelists. Four hours a week, one term.

PROFESSOR JONES.

547. THE SHORT STORY.—The work of this course consists partly in copious reading and criticism of short stories, and partly in story writing. The purpose of the course is to give the student a sound critical knowledge of the modern short story, and to offer practical training in the writing of fiction to those who have the necessary ability. Lectures and recitations, four hours a week, spring term.

PROFESSOR JORDAN.

548. EIGHTEENTH CENTURY LITERATURE.—Primarily a study of the prose and poetry of the Classical period, with an attempt to outline the principles of Classicism. Lectures and recitations, four hours a week, one term.

PROFESSOR JORDAN.

549. BRITISH ROMANTIC POETS OF THE NINETEENTH CENTURY.—This course deals principally with the poetry of Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. Through the work of these men is traced the development of English Romantic poetry, as related to the life and thought of the nineteenth century. Lectures and recitations, four hours a week, fall term.

PROFESSOR JORDAN.

641 (642). CHAUCER.—A study of Chaucer's language and literary style. Students must have the consent of the instructor before electing this course. Lectures and recitations four hours a week, fall and winter terms.

PROFESSOR JONES.

643. **ANGLO-SAXON.**—The purpose of this course is to give students a knowledge of the earliest form of English. Constant comparison of modern English with Anglo-Saxon is made. Lectures and recitations, four hours a week, one term

PROFESSOR JONES.

644 (645). **SHAKESPEARE.**—A critical study of a few plays. Lectures and recitations, four hours a week, fall and winter terms.

PROFESSOR JONES.

646. **THE DRAMA IN ENGLAND FROM 1580 TO 1642.**—A study of the Elizabethan dramatists, exclusive of Shakespeare. Four hours a week, one term.

PROFESSOR JORDAN.

647. **TENNYSON AND BROWNING.**—Emphasis is placed upon the art and thought of Tennyson and Browning in their relation to modern life. Lectures and recitations, four hours a week, one term.

PROFESSOR JORDAN.

648. **LYRIC POETRY.**—A study of the greatest examples of lyric poetry, not only in English but in other literatures, wherever adequate translations are available. Lectures and recitations, four hours a week, one term.

PROFESSOR ADLER.

649. **THE CONTEMPORARY DRAMA.**—A study of recent plays in Europe and America from the literary, dramatic, and social points of view, with discussion and illustration of dramatic principles. Lectures, reading, and dramatic criticism, four hours a week, spring term.

ASSISTANT PROFESSOR HOLCOMBE.

721 (722) (723). **LITERATURE OF THE BIBLE.**—A literary study of the Bible. The first two terms are devoted to the Old Testament and the third term to the New Testament. Lectures, recitations, and parallel readings. Three hours a week, with six term-hours' credit for the year.

MISS DICKEY.

741. **MILTON.**—An intensive study of the poetry of Milton, with some consideration of his prose. Lectures and recitations, four hours a week, one term. (*Not offered in 1920-1921.*)

742. **ESSAYS OF THE NINETEENTH CENTURY.**—Attention is given chiefly to Lamb, De Quincey, Macaulay, Carlyle, Emerson, Newman, and Arnold. Lectures, readings, and reports, four hours a week, spring term.

PROFESSOR JONES.

**743. LITERARY CRITICISM.**—The aim of this course is to present the more generally accepted principles of literary criticism and to apply them to the chief types of literature, such as the drama, the essay, prose fiction, and poetry. Students must have the consent of the instructor before electing this course. Lectures and recitations, four hours a week, one term.

PROFESSOR JONES.

**744. COMPARATIVE LITERATURE.**—A general survey of some of the more important works of Continental writers and of literary tendencies since the Renaissance, with stress upon such as have been influential in England. A number of masterpieces, either individually important or representing great movements in literature, will be read in translation. Students must have the consent of the instructor before electing this course. Four hours a week, one term.

PROFESSOR JONES.

**745. THE TEACHING OF ENGLISH.**—This course presents the aims, methods, and organization of English in the high school. It includes practice in the correction of themes, a study of some of the classics used for high school reading, and a rapid review of some parts of grammar and rhetoric. Students must have the consent of the instructor before electing this course. Four hours a week, one term.

PROFESSOR JONES.

#### PUBLIC SPEAKING

**533 (534). ARGUMENTATION.**—The aim of the course is two-fold: to teach the principles of argumentation and of sound reasoning power; to afford practice in the application of these principles in frequent discussions and debates. Lectures, recitations, reading, and class exercises, three hours a week, fall and winter terms.

PROFESSOR JORDAN.

**535. PUBLIC SPEAKING.**—The work of this course includes lecture and text-book work based upon the principles of effective public speaking, and affords training in both formal and informal address. Lectures, recitations, class exercises, three hours a week, spring term.

PROFESSOR JORDAN.

**541. INTERCOLLEGIATE DEBATE.**—The question for intercollegiate debate is studied and briefed, and frequent practice debates are held. This course is open only to students who have been awarded places on the intercollegiate debating squad. Four term-hours' credit.

PROFESSOR JORDAN.



## JOURNALISM

101 (102) (103). **THE AMERICAN NEWSPAPER.**—Practical talks on the work of the newspaper reporter, with practice in newspaper writing. This course is intended primarily for freshmen. One hour a week, no credit.

MR. VOTAW.

537 (538) (539). **NEWSPAPER WRITING.**—Intended for students who expect to make journalism their profession, and for those who wish to have some training in newspaper methods. Methods of gathering news; work of press associations; news values; writing of news. Various forms of news writing are studied. Made as practical as possible by carrying on classwork in connection with student publications. Three hours a week throughout the year.

MR. VOTAW.

521 (522) (523). **NEWSPAPER EDITING.**—Instruction and practice in editing copy, correcting proof, writing headlines, making up, rewriting, and other details of editing; and in the organization and methods of local, state, and national news gathering. Open to students who have had English 537-2. Two hours a week throughout the year.

MR. VOTAW.

## FINE ARTS

MR. TOVEY, MISS GALBRAITH, MRS. CROCKETT, MRS. BATEMAN,  
MISS BELL, MR. MITCHELL, MR. HANSARD.

The Department of Fine Arts offers courses in the theory of music, piano, violin, voice, art, expression, and history of music.

A statement of the requirements for admission will be found on page 29, for regular students, and on page 34, for special students. A statement of tuition and fees will be found on page 35.

Courses in music leading to a diploma or a certificate are outlined on page 54.

Six term hours of credit toward the Bachelor of Arts degree will be allowed for work in music, of which not more than three hours shall be allowed for courses in piano, violin and voice. One year in either piano, violin or voice must be completed in college before the student can enroll for credit in that subject. No credit is allowed unless the student takes at least two lessons a week for a full year.

The courses in art and expression may be elected with credit, in no case to exceed twenty-seven term hours, by students in all courses.

## COURSES

**Theory of Music**

No.	Title	Credits	Prerequisites
111 (112) (113)	Harmony .....	1	†
211 (212) (213)	Advanced Harmony .....	1	†
114 (115) (116)	History of Music .....	1	†
117 (118) (119)	Opera Study .....	1	†
311 (312) (313)	Counterpoint .....	1	†

**Piano**

Freshman .....	0	†
Above Freshman .....	3	†

**Violin**

Freshman .....	0	†
Above Freshman .....	3	†

**Voice**

Freshman .....	0	†
Above Freshman .....	3	†

**Art**

121 (122) (123)	Freehand Drawing.....	6	None
521 (522) (523)	Still-life and Landscape Painting....	6	121 (122) (123)
124 (125) (126)	Elementary Design .....	6	None
524 (525) (526)	Constructive Design .....	6	124 (125)
111 (112)	Penmanship and Lettering .....	2	None
127 (128) (129)	Normal Art .....	6	None
621 (622) (623)	Jewelry .....	6	124

**Expression**

131 (132) (133)	Vocal Expression .....	9	†
121	The Teaching of Reading.....	2	131 (132) (133)†
521 (522)	Vocal Interpretation .....	4	131 (132) (133)†
531 (532)	Dramatic Interpretation of Shakespeare's Plays .....	6	131 (132) (133)†
533	Continuation of 531 (532).....	3	531 (532)†
523 (524) (525)	Vocal Expression as Art .....	6	131 (132) (133)†
534 (535)	Art of Play Reading .....	6	†
536	Continuation of 534 (535).....	3	534 (535)†

†Permission must be secured from the instructor in charge before registering for any course in this department.

## THEORY OF MUSIC

111 (112) (113). HARMONY.—Keys, scales, and signatures; simple part writing; chords of the seventh and their inversions;

altered and augmented chords; modulation. One hour a week.

MR. MITCHELL.

211 (212) (213) ADVANCED HARMONY.—Modulation continued; suspension; passing chords; unharmonious notes; organ point; harmonization of melodies; playing of figure bases; double chants and chorals. One hour a week.

MR. MITCHELL.

114 (115) (116). HISTORY OF MUSIC.—Music among ancient peoples; early church music; the development of polyphonic and dramatic music; the history of instrumental music and the evolution of musical instruments; the development of the opera and oratorio; modern music and musicians. One hour a week.

MISS BELL.

117 (118) (119). OPERA STUDY.—The librettos and stories of various standard operas are studied. Concerts are given weekly consisting of selections from talking machine records with piano accompaniments. One hour a week.

MR. TOVEY.

311 (312) (313). COUNTERPOINT.—First semester: single counterpoint in all forms, two and three voices; second semester: single counterpoint in four voices and double counterpoint, all forms. One hour a week.

MR. TOVEY.

#### PIANO

The aim of the courses in piano music is to develop technical control and the power of musical conception as adapted to artistic ends.

PREPARATORY GRADES.—*National Graded Course*, Books 1 and 2; simple exercises for wrist development, major scales, broken chords, and arpeggios. Sonatinas by Diabelli, Clementi, Lichner; studies from Koehler, Biehl, Loeschorn, Czerny, Gurlitt; salon pieces; preparatory octave work.

MR. TOVEY,

MISS BELL,

MR. MITCHELL.

INTERMEDIATE GRADE.—Selected technics from Tausig, Krauss, Heller, Loeschorn, *Op. 66*, *Czerny Op. 299*; sonatas by Mozart, Kuhlau, Haydn, Beethoven, Mendelssohn's *Songs Without Words*;

Smith and Low's *Octave Studies*; duets for piano, and piano and violin; Bach's *Little Preludes and Fugues*.

MR. TOVEY,  
MISS BELL,  
MR. MITCHELL.

ADVANCED GRADE.—Extended scales in various accents; diminished and dominant seventh arpeggios; etudes from Czerny, *Op. 740*; Heller, *Op. 45*; Cramer; Clementi's *Gradas Par-nassum*; Kullak's *Octave Studies*; Bach's *Suites, Preludes, Fugues*; Chopin, *Op. 10* and *Op. 25, Valses, Preludes, Nocturnes*; Beethoven, *Sonatas*; compositions by Mendelssohn, Schumann, Schubert, Liszt, Grieg, McDowell, and other modern composers.

MR. TOVEY,  
MISS BELL,  
MR. MITCHELL.

#### ACCOMPANIMENT.

MR. TOVEY.

THE TEACHING OF MUSIC.—A course designed for students who expect to teach music.

MR. TOVEY,  
MISS BELL.

#### VIOLIN

The instruction in violin music is designed to develop correct technique. In addition to the studies, the student is given compositions of standard composers.

FIRST AND SECOND GRADES.—Studies by Dancia and Dont.

MR. HANSARD.

THIRD AND FOURTH GRADES.—Studies by Kayser, Kreutzer, and Schradick.

MR. HANSARD.

FIFTH AND SIXTH GRADES.—Studies by Kreutzer, Fiorillo, and Rhode.

MR. HANSARD.

#### VOICE

The purpose of instruction in this branch of music is the correct production of tone and the building and development of the voice according to the old Italian method. Special stress is laid on breath control, accuracy of tone, distinct articulation, the study of intervals, scale building, sight reading, and phrasing.

PREPARATORY GRADES.—Marchesi's *Individual Exercises*; Panofka's *Vocalises*, Op. 85. Studies in sight reading and easy songs.

MRS. BATEMAN.

INTERMEDIATE GRADE.—Concone, Op. 12; Marchesi's *Individual Exercises*; Panofka's *Vocalises*, Op. 81; Sieber's *Vocalises*, Op. 94; Concone's *Lessons*, Op. 17, and songs of moderate difficulty, including oratorio selections.

MRS. BATEMAN.

ADVANCED GRADES.—Lamperti's *Studies in Bravura*; oratorio and opera arias and more difficult songs by English, French, Italian and German composers.

MRS. BATEMAN.

#### THEORY AND PRACTICE OF ART

The plan of incorporating a practical school of drawing and painting in a college course has been demonstrated as not only possible but very successful. The studio work is conducted in the same manner as in the purely technical art schools, while the students have the added advantage of doing regular academic work which renders them more sensitive to artistic impression.

No tuition is charged for these courses.

121 (122) (123). DRAWING.—Drawing from casts, life, and perspective problems. Four hours a week. Students may enter at beginning of any term.

MISS GALBRAITH.

†521 (522) (523). STILL LIFE AND LANDSCAPE PAINTING.—Painting still life and landscape with original composition. Four hours a week. Students may enter at beginning of any term.

MISS GALBRAITH.

124 (125) (126). ELEMENTARY DESIGN.—Two hours of theory and practice of design, and two hours of instruction and practical application of the principles of design to definite problems in costume and interior decoration.

MISS GALBRAITH.

†524 (525) (526). CONSTRUCTIVE DESIGN.—This course applies well recognized principles of general design to specific materials and problems encountered in the Industrial Arts. Four hours a week.

MISS GALBRAITH.

127 (128) (129). NORMAL ART.—This course presents the teaching of art in the public schools not as "Drawing" from a

realistic point of view, but Design and Color as the basis of an Art that is related to the industries with Utility as the supreme test. Four hours a week.

MISS GALBRAITH.

†527 (528) (529). **ADVANCED NORMAL ART.**—This course is a continuation of course 127-129. Four hours a week.

MISS GALBRAITH.

†These courses may not be offered in 1920-21.

#### EXPRESSION

The aim of the courses in this department is (1) to secure naturalness and freedom from selfconsciousness in reading and speaking and (2) to train the student to arrive at a correct understanding of literature and the appreciation of its spirit and essence through vocal interpretation. The student is made to realize that the reader's concept is mental. The voice and body are trained to willing obedience to this mentality. Close attention is given to voice culture and correct articulation.

131 (132) (133). **VOCAL EXPRESSION.**—First term, the fundamental principles in the correct use of the body and voice in speaking and reading; second and third terms, accuracy of observation and care in analysis. The student is trained to read aloud simply, easily and naturally, from such works as the Old and New Testament, Emerson, Longfellow, and Shakespeare. Some attention is given to story-telling, speech-making, and dramatic interpretation. Three hours a week.

MRS. CROCKETT.

121. **THE TEACHING OF READING.**—Designed for prospective public school teachers aiming to give a definite, practical method of instruction which shall apply to each grade. Two hours a week.

MRS. CROCKETT.

521 (522). **VOCAL INTERPRETATION.**—An advanced course in the interpretation of literature. Special attention is given to the study of Tennyson, Browning and the dramatic monologue, various forms of literature, and literary analysis. Two hours a week.

MRS. CROCKETT.

531 (532). (533). **DRAMATIC INTERPRETATION OF SHAKESPEARE'S PLAYS.**—A careful analysis and reading of three or four plays. At the end of the year one of the plays will be given in costume



by the members of the class. Students in the course are advised to take English 644 (645). Three hours a week.

MRS. CROCKETT.

523 (524) (525). VOCAL EXPRESSION AS ART.—Impersonation, gesture, dialect, reading, recitation, preparation of programs and "cutting" and adapting selections for the platform. Students will be required to prepare selections and present them before the class for criticism. Two hours a week.

MRS. CROCKETT.

534 (535) (536). THE ART OF PLAY READING.—Plays are read aloud or put into rehearsal in order that students may vitalize the character and perceive the fundamental thing; the reaction of one thought and emotion upon another. Frequent readings by the instructor from masterpieces of the drama are given before the class. The class is affiliated with the Drama League of America. Three hours a week. Open only to advanced students.

MRS. CROCKETT.

## GEOLOGY

\*PROFESSOR DRAKE, ACTING PROFESSOR STEEL.

*Requirements for a Major in Geology*, courses 141, 142, (143), 231, 232 (233), 321, 531, 331, 334, 337 (338) or 431 or Mining Engineering 321 (322) in addition to which a report must be submitted in the senior year, to include maps, sections and other necessary illustrations of some area, the geology of which the student has made a special study. Students who expect to teach geography and physiography in the secondary schools should complete, as a minimum requirement, courses 141, 142 (143) and 321. A course in the teaching of science should be included. Students in agriculture are advised to take courses 141, 142 (143), and students in civil engineering courses 142 (143), 334 and 331. Students seeking a general knowledge of geology as a part of cultural education should elect courses 141, 142 (143) and 231, 232 (233).

As an aid in the instruction in geology, localities about the University will be cited and some field work in those localities required of students. Within a short distance are found formations from the Cambro-Ordovician to the Pennsylvanian, inclusive. The Ozark plateau region about Fayetteville offers abundant opportunity for physiographic studies and stratigraphic mapping as well as paleontological studies.

\*Leave of absence December, 1919, to May, 1920.

## COURSES

No.	Title	Credit	Prerequisites
141	Meteorology and Geography .....	4	None
142 (143)	Physical Geography.....	8	None
231	Biology as Related to Geology..	3	142 (143)
232 (233)	Historical Geology.....	6	142 (143), 231
321	Practical Geology .....	2	142 (143)
431	Paleontology .....	3	231, 232 (233)
334	Economic Geology .....	3	142 (143) and 331
337 (338)	Petrology .....	6	531, 331
531	Crystallology and Mineralogy .....	3	Math. 158, Chem. 141 (142) (143)
331	Blow Pipe Analysis .....	3	Chem. 141 (142) (143)

141. METEOROLOGY AND GEOGRAPHY.—Elementary course. Movements and work of the atmosphere, and the causes of climatic conditions over the world, and the effects upon life that the climatic and physiographic features produce. Lectures and recitations four hours a week.

PROFESSOR DRAKE.

142 (143). PHYSICAL GEOLOGY.—Study of the materials of the earth and changes that take place, due to the action of the atmosphere, water, organic life, and internal forces. Lectures and recitations four hours a week.

PROFESSOR DRAKE.

231. BIOLOGY AS RELATED TO GEOLOGY.—Outline study of plants and animals, with reference to their relationships, manner of development, and bearing on geology. Lectures three hours a week.

PROFESSOR DRAKE.

232 (233). HISTORICAL GEOLOGY.—Development of the earth from its origin to the present time, with special reference to the life, physical conditions and rock formations that mark each period of the earth's history. Lectures three hours a week.

PROFESSOR DRAKE.

321. PRACTICAL GEOLOGY.—Field and laboratory practice six hours a week, including exercises in the construction of geologic sections and maps.

PROFESSOR DRAKE.

334. ECONOMIC GEOLOGY.—The formation, mode of occurrence, uses, and geographic distribution of useful geologic products. Lectures and recitations three hours a week.

PROFESSOR DRAKE.

337 (338). PETROLOGY.—Microscopical and Macroscopical determination of minerals and rocks and classification of rocks.

Lectures and recitations first part of course, laboratory work last part of course.

PROFESSOR DRAKE.

431. PALEONTOLOGY.—Lectures and recitations one hour and field and laboratory six hours a week, involving the collection of local fauna and its study.

PROFESSOR DRAKE.

531. CRYSTALLOGRAPHY AND MINERALOGY.—Lectures and recitations three hours a week on the elements of geometric crystallography, followed by laboratory work on the determination of minerals.

PROFESSOR DRAKE.

331. DETERMINATIVE MINERALOGY AND BLOW PIPE ANALYSIS.—Exercises in the determination of minerals by the use of the blow-pipe and in the wet way. Laboratory work six hours a week with occasional recitations.

PROFESSOR DRAKE.

## GERMAN

PROFESSOR ADLER

The aim of the courses in the department of German is primarily to acquaint the student with the German language and literature as a means of culture. An effort is made to give the student a knowledge of the history, customs, and institutions of the German people. The excellent collection of German books in the University library offers unusual facility for advanced work in literature.

*Requirements for a Major in German*, fifty-four credit hours. Students preparing to teach German should consult the head of the department.

## COURSES

No.	Title	Credit	Prerequisites
131 (132) (133)	Elementary German .....	9	None
231 (232) (233)	Scientific German .....	9	131-133
521 (522) (523)	Introductory Composition ..	6	131-133
534 (535) (536)	Modern Prose and Poetry ..	9	131-133
631 (632) (633)	Goethe and Schiller .....	9	231-233, or 521-523, or 534-536
624 (625) (626)	Lyrics and Ballads .....	6	231-233, or 521-523, or 534-536
627 (628) (629)	Composition and Conversation .....	6	231-233, or 521-523, or 534-536
731 (732) (733)	History of German Literature .....	9	231-233, or 521-523, or 534-536

734 (735) (736)	Goethe's Faust .....	9	631-633, or 624-626, or 627-629
737 (738) (739)	Teachers' Course .....	9	731-733, or 734-736
821 (822)	Goethe in English .....	4	None
823	Schiller in English .....	2	821-822

131 (132) (133). **ELEMENTARY GERMAN.**—Grammar, composition, and the reading of easy prose and poetry. Three hours a week.

**PROFESSOR ADLER.**

231 (232) (233). **SCIENTIFIC GERMAN.**—Reading and discussion of works of a general, as well as more specialized, scientific nature. Three hours a week.

**PROFESSOR ADLER.**

521 (522) (523). **INTRODUCTORY COMPOSITION.**—A thorough review of grammar and practice in the art of composition. Two hours a week.

(Alternates with course 627-629).

**PROFESSOR ADLER.**

534 (535) (536). **MODERN PROSE AND POETRY.**—Reading and interpretation of eighteenth and nineteenth century authors; practice in conversation. Three hours a week.

**PROFESSOR ADLER.**

631 (632) (633). **GOETHE AND SCHILLER.**—A study of the lives and selected works of these authors; collateral reading and reports. Three hours a week.

**PROFESSOR ADLER.**

624 (625) (626). **LYRICS AND BALLADS.**—A study of the lyric and ballad as literary forms. Two hours a week. (Not offered in 1920-1921).

**PROFESSOR ADLER.**

627 (628) (629). **COMPOSITION AND CONVERSATION.**—Oral and written reproduction of stories and anecdotes; conversation and original composition based on subjects dealing with the geography, history, customs, and institutions of Germany. Two hours a week.

(Alternates with course 521-523).

**PROFESSOR ADLER.**

731 (732) (733). **HISTORY OF GERMAN LITERATURE.**—A study of the chief literary movements and monuments of German literature from the earliest times to the present. Three hours a week.

(Alternates with course 737-739).

**PROFESSOR ADLER.**

734 (735) (736). **GOETHE'S FAUST.**—Interpretation and appreciation of the poem as an expression of the artist's personality

and Weltanschauung. Three hours a week.  
(Not offered in 1920-1921).

PROFESSOR ADLER.

737 (738) (739). TEACHERS' COURSE.—Discussion of problems and methods of teaching German. Collateral reports and practice teaching. Three hours a week.  
(Alternates with course 731-733).

PROFESSOR ADLER.

821 (822). GOETHE IN ENGLISH.—Interpretation of the life and principal works of the poet with assigned collateral reading in translation. While counting for credit, this course may not be used to satisfy the foreign language requirement of twenty hours. Open to Sophomores, Juniors and Seniors. No knowledge of German required. Two hours a week.

PROFESSOR ADLER.

823 SCHILLER IN ENGLISH.—Continuation of 821 (822). Interpretation and appreciation of Schiller as a literary artist. The personal and literary relations between Goethe and Schiller will receive attention. Two hours a week.

PROFESSOR ADLER.

## HISTORY AND POLITICAL SCIENCE

PROFESSOR THOMAS, ASSISTANT PROFESSOR CLEVEN,  
AND ASSISTANT PROFESSOR HANCOCK

The courses in this department are designed to form a part of a general cultural education. They are essential to a thorough preparation for law, journalism, politics, ministry, or any other public calling. Course 131 (132) (133) is foundation work and should be taken in the Freshman year.

*Requirements for a Major in History.* forty-five credit hours in history and political science. Students expecting to teach history in the secondary schools should complete at least twenty-seven credit hours in the department. Course 131, (132) (133), should be the basis for this work, and courses 531-536 should follow.

### COURSES

#### History

No.	Title	Credit	Pre-requisites
131, 132, 133	Contemporary Civilization .....	9	None
531 (532) (533)	History of the U. S. since 1776.....	9	†

534 (535) (536)	History of England to 1921.....	9	†
636 (637) (638)	History of the British Empire.....	9	15 hours
631	History of Greece.....	3	9 hours
632	History of Rome.....	3	9 hours
*633	The United States, 1763-1789.....	3	15 hours
*634	The Civil War and Reconstruction.....	3	15 hours
635	The Great War.....	3	†
559	Hispanic America.....	5	9 hours
537	French Revolution.....	3	9 hours
538	Europe in the 19th Century.....	3	9 hours
*731	American Diplomacy.....	3	15 hours
<b>Political Science</b>			
†531	American National Government.....	3	6 hours
†532	American State Government.....	3	6 hours
†533	Political Parties.....	3	6 hours
*534	National Government.....	3	15 hours
*535	International Law.....	3	15 hours

\*Open to Juniors and Seniors.

†Not open to Freshmen.

131 (132) (133). **INTRODUCTION TO CONTEMPORARY CIVILIZATION.**—Designed to furnish a knowledge of the fundamental features of present-day civilization with the factors that determine the nature and course of civilization. Contemporary ideals of life will be analyzed and compared with ideals of the past. The purpose of the course is to give the student an understanding of critical issues of the present and to supply him with information helpful in attempting the solution of insistent problems confronting the western world. Syllabus and text. Three hours a week throughout the year.

ASSISTANT PROFESSOR CLEVEN

531 (532) (533). **HISTORY OF THE UNITED STATES, 1776-1920.**—After a brief survey of the antecedents of the Revolution, a careful study will be made of the Confederation, the formation and adoption of the Constitution, the party developments, foreign relations, economic developments, and growth of nationalism, and democracy. Special attention will be given to the gradual sectionalization of the country over slavery and states' rights, the results of the Civil War and Reconstruction, the industrial and social developments of recent times, the growth of democracy, the Great War and the part of the United States in it, and the peace settlement. Prerequisite, History 131 (132) (133) or three years of history in high school. Three hours a week.

PROFESSOR THOMAS.

534 (535) (536). **HISTORY OF ENGLAND TO 1921.**—A general course treating the political, literary, religious, and economic activities of the English people. The origin and growth of the more important institutions, such as kingship, parliament, court



and the church; the struggle for constitutional, democratic government, especially the great reform of the nineteenth and twentieth centuries, and the movement for social betterment. Brief survey of the British Empire. Lectures and recitations three hours a week throughout the year.

ASSISTANT PROFESSOR CLEVEN.

537. FRENCH REVOLUTION AND THE NAPOLEONIC ERA.—France on the eve of the Revolution; French political philosophers; causes and events of the Revolution; and the wars of Napoleon. Three hours a week. Fall term.

ASSISTANT PROFESSOR CLEVEN.

538. DEMOCRATIC MOVEMENT IN THE NINETEENTH CENTURY.—A brief survey of Europe in 1815 will be made, after which the development of the constitutional government will be considered; the unification of Italy and Germany, and the present condition of world politics. Three hours a week. Winter term.

ASSISTANT PROFESSOR CLEVEN.

559. HISTORY OF HISPANIC AMERICA SINCE 1800.—A brief survey of the Spanish and Portuguese colonial systems will precede a careful study of the wars of emancipation; the rise and development of Hispanic American nations; the relations of these with foreign countries; and the development of Pan-Americanism. Special attention will be given to the Monroe, Calvo, and Drago doctrines. Syllabus and text. Recitations and lectures five times a week. Spring term.

ASSISTANT PROFESSOR CLEVEN.

631. HISTORY OF GREECE.—A course designed to give a more extensive knowledge of the history and institutions of the Greeks. A general knowledge of the subject is presumed. Three hours a week. Winter term.

ASSISTANT PROFESSOR HANCOCK.

632. HISTORY OF ROME.—A course designed to give a more extensive knowledge of the history and institutions of the Romans. A general knowledge of the subject is presumed. Three hours a week. Spring term.

ASSISTANT PROFESSOR HANCOCK.

633. THE UNITED STATES, 1736-1789.—A study of the colonies in their relation to the mother country, with special reference to the attempt at imperial taxation. Particular attention will be given to the literature of the period as preparing the colonists for separation. The steps leading to the Declaration of Independence, the failure of the Confederation, and the formation

and adoption of the Constitution will be studied in detail. Three hours a week. Fall term.

634. THE CIVIL WAR AND RECONSTRUCTION.—The first part of this course will deal mainly with the events leading up to the war; the second part, with the political, economic, and social phases of the Reconstruction. Three hours a week. Winter term.

PROFESSOR THOMAS.

635. THE GREAT WAR.—The balance of power, imperial ambitions, nationalism, colonial and commercial rivalries, the race for armaments, the Great War and its results. Three hours a week. Spring term.

PROFESSOR THOMAS.

636 (637) (638). HISTORY OF THE BRITISH EMPIRE.—After a brief survey of the period of the formation of the English nation, a study will be made of the rise and growth of the British Empire. The establishment and growth of colonies and dependencies in the West Indies, the Americas, Africa, Asia, and Oceania; the gradual development of a British imperial policy; and the British colonial administrative system. The struggle for the democratization of English institutions, and social legislation in the self-governing colonies of the empire. Three times a week throughout the year.

ASSISTANT PROFESSOR CLEVEN.

731. AMERICAN DIPLOMACY.—Covers the entire period of the history of the United States, giving special attention to the diplomacy of the Revolution and of the second war with England, the Monroe Doctrine, and subsequent relations with Latin America, arbitration, Asiatic questions, and the Great War and the peace settlement. Three hours a week. Spring term.

PROFESSOR THOMAS.

#### POLITICAL SCIENCE

531. AMERICAN NATIONAL GOVERNMENT.—A basic course for more advanced work in government. Some attention will be given to the organization of our national government and to the work of the co-ordinate branches, but most emphasis will be laid upon the work of administration. This course is open to all students who have completed not less than six credit hours in history. Three hours a week. Fall term.

PROFESSOR THOMAS.

532. AMERICAN STATE AND LOCAL GOVERNMENTS.—A brief review of the development of American state constitutions, followed by a study of the structure and workings of state governments as organized today and of some of the practical problems now before the states; a brief survey of county and municipal government. Three hours a week. Winter term.

PROFESSOR THOMAS.

533. POLITICAL PARTIES.—A study of the origin and development of political parties in the United States and their present organization and activities. Three hours. Spring term.

PROFESSOR THOMAS.

534. NATIONAL GOVERNMENT.—A study and comparison of the structures and powers of the national governments of the United States and of the leading European nations. Special attention will be given to the place of the federal system in public law. Open only to juniors and seniors. Three hours a week. Fall term.

PROFESSOR THOMAS.

535. INTERNATIONAL LAW.—A study of the development of international law and of the usages and principles now considered binding on civilized nations. This course is open only to juniors and seniors. Three hours a week, with considerable outside reading. Winter term.

PROFESSOR THOMAS.

## MATHEMATICS AND ASTRONOMY

PROFESSOR DROKE, PROFESSOR HARDING, EMERITUS ASSOCIATE PROFESSOR DUNN, ASSISTANT PROFESSOR HALPERIN, MISS HUGHES

The courses in this department are designed to meet the requirements of (1) students in the courses in engineering, (2) students who expect to teach mathematics, and (3) students who are interested in mathematics for the sake of the subject itself.

*Requirements for a Major in Mathematics*, fifty credit hours, including courses 154, 155, 156, 234 (235) (236), 531 (532), 541 (542) (543), and 633 (634) (635) or 631 (632), or their equivalent. Students in engineering may elect in addition to the prescribed courses, 537 (538) and 631 (632). Students who are preparing to teach mathematics in the secondary schools must complete Mathematics 154, 155, 156, 234 (235) (236), 541 (542) (543), 633 (634) (635), 534, 521 (522), and Astronomy 151 (152).

Students who wish only a general knowledge of the subject may take Mathematics 154, 155, 156, and Astronomy 151 (152).

## COURSES

**Mathematics**

No	Title	Credit	Prerequisites
51 (52)	Plane Geometry .....	10	None
151 (152)	Plane Geometry [Same as 51 (52)].....	10	None
54	Elementary Algebra .....	5	None
154	Elementary Algebra (Same as 54).....	5	None
155	Solid Geometry .....	5	152
156	Plane Trigonometry .....	5	154
157	College Algebra .....	5	None
128	Solid Geometry and Analytic Geometry .....	2	156
139	Advanced Algebra .....	3	156, 157
234 (235) (236)	Analytic Geometry .....	9	154, 156
247	Algebra and Plane Trigonometry .....	4	None
251 (252)	Differential and Integral Calculus .....	10	256
256	Analytic Geometry .....	5	157, 158
531 (532)	Advanced College Algebra .....	6	154
541 (542) (543)	Differential and Integral Calculus .....	12	154, 155, 156, 235
534	Teaching of Secondary Mathematics .....	3	154, 155, 156
521 (522)	History of Mathematics.....	4	234 (235) (236)
537 (538)	Elementary Mechanics .....	6	541 (542) (543) or 251 (252)
633 (634) (635)	Theory of Equations.....	9	531 (532)
*631 (632)	Differential Equations .....	6	541 (542) (543) or 251 (252)

**Astronomy**

151 (152)	Elementary Discriptive Astronomy .....	10	None
141	The Astronomy of Physiography ....	4	None
531 (532) (533)	Mathematical Astronomy .....	9	Math. 154, 155, 156

\*See page 56.

Note.—Full credit in Mathematics 154 and Mathematics 151 (152) will be given only when they are taken as a part of the student's first ninety-six hours' credit. Half credit only will be given if taken after the student has completed ninety-six hours' credit. No credit will be given if taken after the student has completed 144 hours' credit.

51 (52). PLANE GEOMETRY.—A collegiate treatment of plane geometry designed for students who offer no geometry for entrance. This course may be taken by students in the colleges of Engineering and Agriculture to remove entrance deficiencies. Five hours a week.

MISS HUGHES.

151 (152). PLANE GEOMETRY.—Same as 51 (52). For students in the Colleges of Arts and Sciences, and Education. Five hours a week.

PROFESSOR HARDING.

54. ELEMENTARY ALGEBRA.—A collegiate treatment of advanced high school algebra, designed for students who offer only one unit in algebra for entrance. This course may be taken by students in the colleges of Engineering and Agriculture to remove entrance deficiencies. Five hours a week.

PROFESSOR HARDING.

154. ELEMENTARY ALGEBRA.—Same as 54. For students in the Colleges of Arts and Sciences, and Education. Five hours a week.

MISS HUGHES.

155. SOLID GEOMETRY.—Designed primarily for students in the Colleges of Arts and Sciences, and Education, who offer one unit of plane geometry for entrance. Five hours a week.

MISS HUGHES.

156. PLANE TRIGONOMETRY.—Designed especially for students in the Colleges of Arts and Sciences, and Education, who offer one unit of plane geometry for entrance. Five hours a week.

PROFESSOR DROKE.

157. COLLEGE ALGEBRA.—Designed primarily for students in the courses in engineering who offer at least one and one-half units in algebra for entrance. Five hours a week.

ASSISTANT PROFESSOR HALPERIN,  
MISS HUGHES.

128. SOLID GEOMETRY.—Designed primarily for students in engineering. Two hours a week, third term of freshman year.

ASSISTANT PROFESSOR HALPERIN,  
MISS HUGHES.

139. ADVANCED ALGEBRA.—Designed primarily for students in engineering. Three hours a week, third term of freshman year.

ASSISTANT PROFESSOR HALPERIN,  
MISS HUGHES.

234 (235) (236). ANALYTIC GEOMETRY.—Designed primarily for students in the College of Arts and Sciences, and the College of Education, who offer at least one unit in algebra and one unit in plane geometry for entrance. Three hours a week.

MISS HUGHES.

247. ALGEBRA AND PLANE TRIGONOMETRY.—Designed for students in the courses in agriculture, including a study of factoring, fractional equations, theory of exponents, radicals, and quadratic equations; trigonometric functions, functions of multiple and sub-multiple angles, and solution of triangles. Four hours a week.

ASSISTANT PROFESSOR HALPERIN.

251 (252). DIFFERENTIAL AND INTEGRAL CALCULUS.—Designed for students in the courses in engineering. Five hours a week.

ASSISTANT PROFESSOR HALPERIN.

256. ANALYTIC GEOMETRY.—The analytic geometry in this course is a continuation of course 128, primarily for engineering students. Five hours a week, first term sophomore year.

ASSISTANT PROFESSOR HALPERIN.

MISS HUGHES.

531 (532). ADVANCED ALGEBRA.—Designed for students who have taken course 154. Three hours a week.

PROFESSOR DROKE.

541 (542) (543). DIFFERENTIAL AND INTEGRAL CALCULUS.—Designed for juniors and seniors in the College of Arts and Sciences. Four hours a week.

PROFESSOR DROKE.

534. THE TEACHING OF SECONDARY MATHEMATICS.—Designed for prospective high school and elementary school teachers. Three hours a week.

PROFESSOR DROKE.

521 (522). HISTORY OF MATHEMATICS.—Recommended to those who are majoring in mathematics. Two hours a week.

PROFESSOR DROKE.

537 (538). ELEMENTARY MECHANICS.—The application of mathematics to mechanics; the laws of statics and dynamics, forces, motion of particles, friction, work and energy. Open to all juniors. Three hours a week.

PROFESSOR HARDING.

633 (634) (635). THEORY OF EQUATIONS.—Three hours a week.

PROFESSOR HARDING.

631 (632). DIFFERENTIAL EQUATIONS.—Three hours a week.

ASSISTANT PROFESSOR HALPERIN.



## ASTRONOMY

151 (152). **ELEMENTARY DESCRIPTIVE ASTRONOMY.**—Lectures and recitations five hours a week, with occasional meeting at night for observation. A knowledge of college mathematics is not necessary.

PROFESSOR HARDING.

141 **THE ASTRONOMY OF PHYSIOGRAPHY.**—An elementary course dealing with those fundamentals of physiography which grow directly out of astronomy. Designed especially for students in the College of Education who are preparing to teach high school science. Lectures and recitations four hours a week, with occasional meetings at night for observation.

PROFESSOR HARDING.

531 (532) (533). **MATHEMATICAL ASTRONOMY.**—Astronomical co-ordinates, parallax, and time, determination of latitude. Three hours a week.

PROFESSOR HARDING.

## MILITARY ART

CAPTAIN HALPINE, SGT. JOHNSON, GREATHOUSE, AND MUELLER

Under the provisions of the Act of Congress approved July 2, 1862, all male students in their Freshman and Sophomore years are required to take Military Art. The course may be elected for credit in the Junior and Senior years.

An officer of the United States army is detailed to act as professor and head of the Department.

The main object of the military instruction given is to qualify college trained men to become officers of infantry, militia, or volunteers. This course of training fits the student for the full duties of citizenship and gives him the normal physical development necessary for his continued well-being through life.

## RESERVE OFFICERS' TRAINING CORPS

The University of Arkansas has complied with the requirements of the War Department and has been officially designated as one of the civil institutions at which shall be maintained units of the senior division of the Reserve Officers' Training Corps.

Eligibility to membership in this Corps is limited to students of institutions in which units of such Corps are established, who are citizens of the United States, who are not less than fourteen years old, and whose bodily condition indicates that they are physically fit to perform military duty, or will be so upon arrival at military age.

When any member of the senior division of the Reserve Officers' Training Corps has completed two academic years of service in that division, has been selected for further training by the president of the institution and by its professor of military art, and has agreed in writing to continue in the corps for the remainder of his course in the institution, devoting five hours per week to the military training prescribed by the Secretary of War, he will be furnished, at the expense of the United States, commutation of subsistence during the remainder of his service in the corps. This commutation will amount to about twelve dollars per month.

The corps of cadets is inspected annually by an officer of the United States Army, detailed for that purpose, and the report of such inspection is transmitted to the Chief of Staff for the information of the Secretary of War.

As soon as practicable, each member of the corps will be furnished free of charge with breeches, cap, coat, leggings, shoes, and cap and collar ornaments.

Each man will receive in actual cost value :

1 Coat, wool O. D. ....	\$9.79
1 Breeches, wool O. D. ....	6.32
1 Shoes, russet or marching.....	4.65
1 Shirt, wool O. D. ....	3.50
1 Overcoat, O. D., short .....	13.56
1 Leggings, pr., canvas .....	1.05
1 Hat, service.....	2.00
1 Collar ornaments .....	.07
1 Hat Cord .....	.09
1 Belt .....	.23
1 Chevrons .....	.57
	<hr/>
	\$41.83

Additional material for those attending summer camps :

2 Breeches, Cotton O. D. ....	\$3.38
1 Shoes, russet or marching.....	4.65
1 Shirt, wool O. D. ....	3.50
1 Leggings, canvas .....	1.05
1 Hat, additional .....	2.00
1 Hat cord.....	.09
	<hr/>
	\$14.67

Each man will receive during four years property valued  
at four times \$41.83.....\$167.32

Each man will receive at two summer camps property valued at two times \$14.67 .....	29.34
Each man recommended will receive commutation of subsistence for two years, or 674 days, at 40 cents per day ..	269.60
Each man may receive commutation of subsistence in kind (not paid in cash) for two summers, 112 days, at 63 cents per day .....	76.16
Transportation averages 1,000 miles per summer, or 3,000 miles for three summers, at 4 cents per mile.....	120.00
	<hr/> \$662.42

There is the privilege of special technical training in various fields without any tuition charges.

There is an opportunity to obtain a commission as Second Lieutenant of the regular army for a period not exceeding six months, with allowances for the grade, and with pay at the rate of \$100.00 per month.

The courses given below are prescribed by the War Department and are so arranged as to make use of the instructors in other Departments of the University.

## COURSES

No.	Title	Credit	Prerequisites
111 (112) (113)	First Year .....	3	None
211 (212) (213)	Second Year .....	3	111 (112) (113)
531 (532) (533)	Third Year .....	9	211 (212) (213)
631 (632) (633)	Fourth Year .....	9	531 (532) (533)

111 (112) (113). **FIRST YEAR.**—Practical and theoretical instruction in organization, military courtesy and discipline, physical drill, group games, infantry drill including school of the soldier, squad, company and battalion, in both close and extended order, ceremonies, care and handling of arms and equipment, small arms firing, personal hygiene, first aid and sanitation, interior guard duty, minor tactics.

SERGEANTS JOHNSON, GREATHOUSE AND MUELLER.

211 (212) (213). **SECOND YEAR.**—Continued practical and theoretical instruction in organization, military courtesy and discipline, physical drill, group games, close and extended order drill including school of the soldier, squad, company, and battalion ceremonies, care and handling of equipment, small arms firing, personal hygiene and sanitation, interior guard duty, minor tac-

tics, topography and map reading, signalling, field engineering, orders and messages.

SERGEANTS JOHNSON, GREATHOUSE AND MUELLER.

531 (532) (533). THIRD YEAR.—Practical and theoretical instruction in camp sanitation and care of troops in the field, minor tactics, liaison for all arms, topography, field engineering, law (common, military and international), infantry drill, close and extended order, school of the platoon and company, ceremonies, care and handling of arms and equipment, small arms, firing, personal hygiene, first aid and sanitation, interior guard duty, topography, orders and messages, military courtesy and discipline, minor tactics and theoretical instruction in the military policy of the United States.

CAPTAIN HALPINE.

631 (632) (633). FOURTH YEAR.—Practical and theoretical instruction in minor tactics, topography, field engineering, company administration, military policy and history of the United States, international law, military law, close and extended order, infantry drill, ceremonies, tactical exercises, care of arms and handling of arms and equipment, small arms firing, personal hygiene, first aid and sanitation, interior guard duty, topography and map reading, orders and messages, tactical walks.

CAPTAIN HALPINE.

## PHYSICAL EDUCATION (FOR WOMEN)

MISS WILLIAMS

The purpose of the work in this department is to improve the standard of the general health, and to increase the physical efficiency of the young women. A physical examination is made of each student upon entrance and at such intervals through the years as may seem necessary.

The work is conducted in the indoor gymnasium and during suitable weather on outdoor courts. The uniform consists of a white middie-blouse, black serge bloomers, and gymnasium shoes.

The courses in physical education are required of all women students during their freshman and sophomore years. A maximum of nine credit hours may be used toward graduation.

111 (112) (113). ELEMENTARY PHYSICAL EDUCATION.—General gymnastic work, games, and lectures on personal hygiene. Two hours a week.

MISS WILLIAMS.

211 (212) (213). INTERMEDIATE PHYSICAL EDUCATION.—(1). General gymnastic work, one hour a week; (2) athletic games one hour a week; (3) æsthetic and folk dancing, one hour a week. Students may elect either (1) and (2), or (1) and (3).

MISS WILLIAMS.

511 (512) (513). ADVANCED GYMNASICS.—Advanced gymnastic work; fencing, field sports, and outdoor games. Two hours a week.

MISS WILLIAMS.

514 (515) (516). ADVANCED DANCING.—Two hours a week.

MISS WILLIAMS.

517 (518) (519). THE TEACHING OF PHYSICAL EDUCATION.—Theoretical and practical work, designed for prospective public school teachers. Two hours a week.

MISS WILLIAMS.

## PHYSICS

PROFESSOR RIPLEY, ASSISTANT PROFESSOR BLACKWOOD

The courses in this department are designed (1) for students in the courses in engineering, agriculture, chemistry, and home economics, as part of the required curriculums and (2) for students in other courses who desire a general knowledge of the subject or who wish to prepare for the study of law or medicine, or for teaching or graduate work.

*Requirements for a Major in Physics*, forty-five term hours, including courses 141-2-3 or 144-5-6 or 147-8-9; 234-5-6; 517-8-9; 531-2-3, or 534-5; 637-8 and 631-2-3. Students who are preparing to teach physics in the secondary schools should complete as a minimum requirement courses 141-2-3; 234-5-6; 517-8-9 and 521-2-3.

## COURSES

No.	Title	Credit	Prerequisite
141 (142) (143)	Experimental Physics .....	12	None
144 (145) (146)	Experimental Physics .....	12	None
147 (148) (149)	General Physics .....	12	None
234 (235) (236)	Theoretical Physics .....	9	Freshman Physics
517 (518) (519)	Laboratory Physics .....	3	Freshman Physics
531 (532)	Heat .....	4	234
634 (635)	Light .....	4	234
637 (638)	Electrical Measurements .....	4	147 or 234
521 (522) (523)	The Teaching of Physics .....	6	517
631 (632) (633)	Kinetic Theory of Gases .....	9	234, Math. 541
537 (538) (539)	Recent Advances in Physics .....	9	531, 634, and 637

141 (142) (143). **EXPERIMENTAL PHYSICS.**—A non-mathematical course in physics designed for students who desire to secure a general knowledge of the subject and of its application to everyday life. The experimental and practical phases of the subject are stressed. Open only to students offering no entrance credit in physics. Lectures and recitations three hours a week, laboratory work two hours a week.

ASSISTANT PROFESSOR BLACKWOOD.

144 (145) (146). **EXPERIMENTAL PHYSICS.**—Similar to 141 but more advanced. Open to students offering physics for entrance credit. Lectures and recitations three hours a week, laboratory work two hours a week.

PROFESSOR RIPLEY.

147 (148) (149). **GENERAL PHYSICS.**—A general course more mathematical than the courses described above. Not open to students who have taken course 141 or 144. Required of all engineering students. The application of physical laws to engineering problems is brought out and the solution of problems of an engineering type is introduced. The subjects of mechanics, heat, and electricity and magnetism are emphasized. Lectures and recitations three hours a week, laboratory work two hours a week.

PROFESSOR RIPLEY,

ASSISTANT PROFESSOR BLACKWOOD.

234 (235) (236). **THEORETICAL PHYSICS.**—An advanced course in General Physics dealing with the development of formulæ and the application of formulæ and laws to the solving of problems. Lectures and recitations three hours a week.

ASSISTANT PROFESSOR BLACKWOOD.

517 (518) (519). **LABORATORY PHYSICS.**—Exercises in the determination of moments of inertia, of center of mass, of Young's modulus, coefficients of viscosity, and of thermal expansion; of heats of fusion and vaporization, of capacity, of high and low potentials, Photometric measurements. Laboratory work two hours a week.

PROFESSOR RIPLEY.

531 (532). **HEAT.**—Thermometry, heats of combustion, specific heats of solids, liquids, and gases; vapor densities, and the laws of thermo-dynamics. Lectures and recitations two hours a week, laboratory work three hours a week.

PROFESSOR RIPLEY.

634 (635). **LIGHT.**—The modern theory of light with a consideration of the recent advances in this branch of physics. The



work deals with the theory of optical instruments, dispersion, diffraction, polarization, etc. Lectures and recitations two hours a week, laboratory work three hours a week.

ASSISTANT PROFESSOR BLACKWOOD.

637 (638).—ELECTRICAL MEASUREMENTS.—Calibration of electrical instruments, measurements of high and low resistances, determination of current, of electromotive force, of inductance, and of capacity. Lectures and recitations two hours a week, laboratory work three hours a week.

PROFESSOR RIPLEY.

521 (522) (523). THE TEACHING OF PHYSICS.—Discussions of methods of teaching physics, of text-books, of laboratory manuals, and of the relation between class work and laboratory work. Designed for prospective high school teachers. Lectures and discussion of assigned reports, two hours a week. (Not offered in 1920-21).

PROFESSOR RIPLEY.

631 (632) (633). KINETIC THEORY OF GASES.—The application of the kinetic theory to diffusion and pressure of gases, and to temperature and specific heats of gases, liquids, and metals. The past fruitfulness and future promise of the theory. Lectures and recitations three hours a week.

ASSISTANT PROFESSOR BLACKWOOD.

537 (538) (539). RECENT ADVANCES IN PHYSICAL SCIENCE.—Lectures on the electron theory, on conduction of electricity through gases, on radioactivity, etc. Lectures three hours a week.

PROFESSOR RIPLEY.

## ROMANCE LANGUAGES

PROFESSOR MARINONI, MISS HARGIS, MISS GILDERSLEVE,  
MISS TAYLOR.

The courses offered in this department are intended to give students a fair knowledge of the French, Italian and Spanish languages and to stimulate knowledge and appreciation of the literary attainments of the Latin people. In the higher courses emphasis is laid especially on the study of literature. In order to give students an opportunity to become familiar with the spoken idiom, several advanced courses are conducted in the language which forms the object of study.

*Requirements for a Major in Romance Languages*, forty-five term hours to be chosen from the following courses, exact requirements to be arranged with the professor in charge: French 141 (142) (143), 551 (552) (553), 554 (555) (556) and 534 (535) (536); Spanish 141 (142) (143) and 531 (532) (533) and Italian 521 (522) (523); or Spanish 141 (142) (143) and Italian 141 (142) (143) and 531 (532) (533). Major students in the department of Romance Languages, upon completing the required work, are expected to have a fair speaking knowledge of at least one language. They must also take course 514 (515) (516) offered by the Department of Ancient Languages. They are therefore urged to take during their third year of work the conversation courses offered by the department. Students preparing to teach either French or Spanish in the secondary schools should complete at least thirty-six credit-hours in the language chosen, and in addition should include a course in the teaching of modern languages. Such students are urged to do at least one year of practice teaching in the Training High School.

## COURSES

## French

No.	Title	Credit	Prerequisite
141 (142) (143)	Elementary French .....	12	None
551 (552) (553)	French Prose and Poetry .....	15	143
*534 (535) (536)	French Literature of the Seventeenth Century .....	9	553
*537 (538) (539)	French Literature of the Nineteenth Century .....	9	553
*511 (512) (513)	Modern French Poetry .....	3	†
*514 (515) (516)	French Drama .....	3	†
*517 (518) (519)	Historical French Grammar .....	3	†
*521 (522) (523)	Balzac .....	6	†

## Italian

141 (142) (143)	Elementary Italian .....	12	None
531 (532) (533)	Advanced Italian .....	9	143

## Spanish

141 (142) (143)	Elementary Spanish .....	12	None
531 (532) (533)	Advanced Spanish .....	9	143
*534 (535) (536)	Spanish Literature .....	9	533
521 (522) (523)	Conversation and Composition.....	6	533

†See statement.

\*See page 56.

## FRENCH

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141 (142) (143). **ELEMENTARY FRENCH.**—Grammar, reading, dictation and composition. Pronunciation is carefully taught and oral drill insisted upon. Four hours a week.

MISS HARGIS,

MISS GILDERSLEVE.

551 (552) (553). **FRENCH PROSE AND POETRY.**—Composition, sight reading, syntax, and conversation. Reading of representative works of modern French authors. Five hours a week.

MISS TAYLOR.

534 (535) (536). **FRENCH LITERATURE OF THE SEVENTEENTH CENTURY.**—A general view of the classic period of French literature. The most important literary productions of the century are read and analyzed. Lectures and recitations in French, with a considerable amount of outside reading. Three hours a week.

MISS TAYLOR.

537 (538) (539). **FRENCH LITERATURE OF THE NINETEENTH CENTURY.**—Lectures and recitations in French, with readings from the leading authors of the Romantic period. Three hours a week.

MISS TAYLOR.

511 (512) (513). **MODERN FRENCH POETRY.**—A study of the evolution of French poetry from 1850 to the present time; new tendencies in poetry and the reaction against Romanticism, as shown in the works of Leconte de Lisle and other Parnassians. Lectures and recitations one hour a week. The permission of the instructor must be secured before registering for this course.

PROFESSOR MARINONI

514 (515) (516). **FRENCH DRAMA.**—A course dealing with the evolution of the French drama from its origin to the present day. Lectures and recitations in French, with some outside reading. One hour a week. The permission of the instructor must be secured before registering for this course.

PROFESSOR MARINONI

517 (518) (519). **HISTORICAL FRENCH GRAMMAR.**—Lectures and recitations one hour a week. The permission of the instructor must be secured before registering for this course.

PROFESSOR MARINONI

521 (522) (523). **BALZAC**—A study of the life and works of Balzac. Lectures and recitations two hours a week. The per-

mission of the instructor must be secured before registering for this course.

MISS HARGIS,

#### ITALIAN

141 (142) (143). **ELEMENTARY ITALIAN.**—Grammar, composition, dictation, and conversation, four hours a week.

PROFESSOR MARINONI

531 (532) (533). **ADVANCED ITALIAN.**—Syntax, composition, conversation, and reading of representative modern works. The second term will be devoted to the study of Dante's *Inferno*. Three hours a week.

PROFESSOR MARINONI

#### SPANISH

141 (142) (143). **ELEMENTARY SPANISH.**—Grammar, composition, dictation, conversation, and reading of easy texts, four hours a week.

MISS GILDERSLEEVE.

531 (532) (533). **ADVANCED SPANISH.**—Syntax, composition, conversation, and reading of representative modern works. **Class** work is conducted largely in Spanish. Three hours a week.

MISS GILDERSLEEVE.

534 (535) (536). **SPANISH LITERATURE.**—Lectures, reports, and reading of standard works. Class work is conducted in Spanish. Three hours a week.

MISS GILDERSLEEVE.

521 (522) (523). **COMPOSITION AND CONVERSATION.**—Two hours a week.

MISS GILDERSLEEVE.

#### ZOOLOGY

PROFESSOR PICKEL.

The courses in zoology are designed to teach the fundamental facts of zoological science, laws of development, heredity, variation and correlation, and the economic importance of animals.

*Requirements for a Major in Zoology*, forty-five credit hours, to include courses 144 (145) (146), 241 (242) (243), 541 (542) (543), 552, 453. Students preparing to study medicine are

advised to select courses 144 (145) (146), 541 (542) (543), 552, 453, and 241 (242) (243). Students who expect to teach zoology in the secondary schools should take courses 144 (145) (146), 241 (242) (243), and 533.

## COURSES

**Zoology**

144 (145) (146)	General Zoology .....	12	None
*552	Animal Histology .....	5	144 (145) (146)
*453	Embryology .....	5	144 (145) (146)
*541 (542) (543)	Comparative Anatomy .....	12	144 (145) (146)
241 (242) (243)	Physiology.....	12	None
331	General Hygiene .....	3	None
532	Theoretical Biology .....	3	None
533	The Teaching of Zoology....	3	144 (145) (146), 241 (242) (243)
311 (312) (313)	Zoological Seminar .....	1	None

144 (145) (146). **GENERAL ZOOLOGY.**—A general course treating of the fundamental facts of zoological science and the laws of development, heredity, variation, and correlation. Field work on local fauna. Lectures and recitations two hours, laboratory practice and field work four hours a week.

**PROFESSOR PICKEL.**

541 (542) (543). **COMPARATIVE ANATOMY OF VERTEBRATES.**—An advanced study of the structure and classification of vertebrates. Lectures and recitations, two hours, laboratory practice four hours a week.

**PROFESSOR PICKEL.**

552. **ANIMAL HISTOLOGY.**—Histological methods of technique. Human tissue is used where possible. Designed primarily for students who expect to study medicine. Lectures and recitations two hours, laboratory practice six hours a week.

**PROFESSOR PICKEL.**

453. **EMBRYOLOGY.**—Vertebrate embryology with regard to organogeny in the chick, pig, and man. Lectures and recitations two hours, laboratory practice six hours a week.

**PROFESSOR PICKEL.**

241 (242) (243). **PHYSIOLOGY.**—The physiology and hygiene of the human body. A knowledge of elementary physiology is required. Lectures and recitations two hours, laboratory practice four hours a week.

**PROFESSOR PICKEL.**

331. GENERAL HYGIENE.—Personal and public hygiene from a general rather than a technical standpoint. Lectures and assigned readings three hours a week.

PROFESSOR PICKEL.

532. THEORETICAL BIOLOGY.—Variation, selection, evolution, heredity, and some of the broader and more general problems of biology. Lectures and recitations three hours a week.

PROFESSOR PICKEL.

533. THE TEACHING OF ZOOLOGY.—The selection of courses, methods of instruction, collecting and preserving laboratory material, laboratory equipment and management, and a comparison of text books. Designed for prospective high school teachers. Lectures and recitations three hours a week.

PROFESSOR PICKEL.

311 (312) (313). ZOOLOGICAL SEMINAR.—Discussion of articles in zoological magazines. One hour.

PROFESSOR PICKEL.



# COLLEGE OF EDUCATION

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The purpose of the College of Education is to bring together and correlate the forces of the University which contribute to the preparation of educational leaders in teaching and supervision, whether rural, elementary, secondary, or executive.

The curriculum will be based upon the assumption that teachers should have, first of all, and fundamental to all other preparation, a broad and liberal education; secondly, that they should be the masters of some special subject which they expect to teach; and, thirdly, that this training should be supplemented by professional courses designed to give them a knowledge of the minds of the pupils to be taught and the problems to be met, with a thorough course in practice teaching under experienced critic teachers.

## ADMISSION

For a statement of the entrance requirements and a description of the subjects accepted for entrance see page 27.

## COURSES OF STUDY

The College of Education offers a four-year course leading to the degree of *Bachelor of Science in Education* (B. S. E.), a graduate course leading to the degree of *Master of Science* (M. S.), and special two- and three-year courses leading to a teacher's certificate.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily at least two hundred and four term hours in approved courses, or one hundred ninety-eight term hours in the teacher-training course in Vocational Home Economics, with the following restrictions:

1. Prescribed courses as follows: English 131 (132) (133), nine hours; Education and Psychology, forty-eight hours, including Psychology 140, Education 140, 130, 131, and 240; Military Art, nine hours (for men), or Physical Education, six hours (for women).

2. Elective courses to be chosen from the following groups with the restrictions noted below:

Group 1. English, French, German, Greek, Italian, Latin and Spanish.

Group 2. Astronomy, Botany, Chemistry, Geology, Mathematics, Physics, and Zoology.

Group 3. Economics, Education, History, Political Science, Philosophy, Sociology, and Home Economics.

Group 4. Agriculture, Engineering, Fine Arts, Law, Medicine, Military Art, and Physical Education.

a. The candidate may elect not more than sixty hours from any one subject and not more than one hundred and twenty hours from any one group, except by special permission of the dean of the college.

b. The candidate must select, not earlier than the beginning of his sophomore year and not later than the beginning of his junior year, one major subject, in which he must complete at least forty-five credit hours, and two minor subjects, in which he must complete at least twenty-seven and eighteen credit hours, respectively, subject to the approval of the head of the department and the dean of the college. The major subject must be chosen from group 1, 2, or 3, except where a student definitely announces his intention to teach subject matter acquired largely in agriculture, engineering, home economics, or fine arts, in which case it may be chosen from group 4. A description of the major requirements of each department will be found under the departmental statements.

c. The candidate must elect not less than twenty-seven hours from each of the first three groups, unless he choose his major from group 4, or unless he be enrolled in one of the Smith-Hughes vocational courses.

d. Students who find their subject matter for teaching in group 4 may major or minor in that group. In every case the dean should be consulted concerning the course of study. One year in either piano, violin, or voice must be completed in college before the student may enroll for credit in that subject. No credit is allowed unless the student takes at least two lessons a week.

e. The candidate must conform as closely as possible to the following schedule in the distribution of his work.

*Freshman Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 131 (132) (133) .....	3	3	3
Psychology 140 .....	4	--	--
Education 130 .....	3	--	--
Education 140 .....	--	4	--
Education 131 .....	--	3	--
Military Art (or) Physical Education .....	1	1	1
*Elective .....	6	6	13
	<u>17</u>	<u>17</u>	<u>17</u>

*Sophomore Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Military Art (or) Physical Education .....	1	1	1
*Elective .....	16	16	16
	<u>17</u>	<u>17</u>	<u>17</u>

*Junior Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
*Elective .....	17	17	17

*Senior Year*

	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Education 240 .....	4	4	4
*Elective .....	13	13	13
	<u>17</u>	<u>17</u>	<u>17</u>

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\*To be chosen with the consent and advice of the candidate's major professor, so as to include not less than ten credit hours in Psychology and Education, and so as to meet the prescribed requirements, outlined above.

## REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

The degree of *Master of Science* is granted for graduate work based on a four-year undergraduate course and a degree of either *Bachelor of Arts* or *Bachelor of Science in Education*

from this institution or any other institution of equal standing. Before a student can become a candidate for the degree, however, his petition for admission to graduate standing must receive the approval of the Senate Committee on Graduate Study and the dean of the college.

1. The minimum time in which a candidate may be permitted to complete the degree is one academic year. In individual cases, where the committee deems it necessary, more than one year may be required.

2. The candidate is required to complete one major subject and not more than two minor subjects in closely related courses, except as noted below. The major subject, occupying with the thesis twenty-four credit hours, must be one in which the candidate has received credit in his undergraduate course for at least thirty-six credit hours. The minor subjects, occupying together eighteen credit hours, must be such in which he has received credit in his undergraduate course for at least eighteen credit hours each.

The admission to candidacy for the Master's degree in the case of men and women of maturity who have clearly demonstrated distinct ability in a special field, and whose undergraduate credits would not meet the numerical requirements of the preceding rule, together with, in every case, the choice of a candidate's major and minors, is subject to the approval of the committee, the dean of the college, and the major professor.

3. Teachers of Smith-Hughes work having a Bachelor's degree from the University of Arkansas, or from another institution of learning of similar grade, and having met the other Federal requirements for Smith-Hughes teaching, shall be eligible for admission to candidacy for the degree of Master of Science.

4. In case of Smith-Hughes teachers proceeding toward the Master's degree, three summers of work in the University and two years of itinerant instruction shall be considered the equivalent of a year's residence work, for the purpose of satisfying the requirements of residence only.

5. Forty-two of the forty-eight hours required of the candidate must be regular class-room work. Candidates who are graduates of this University may pursue one-half of the required work by correspondence, provided that their undergraduate records are satisfactory to the committee and to the dean of the college.

6. A student may be admitted to graduate standing without becoming a candidate for a degree, by permission of the committee and the dean of the college.

### *REQUIREMENTS FOR A TEACHER'S CERTIFICATE*

The teacher's certificate is granted in accordance with the law of the State of Arkansas, which reads:

"That the diploma from the teachers' training department of the University of Arkansas shall be equivalent to a teacher's professional license, which shall entitle the holder to teach in any public school in the State of Arkansas for a period of six years from and after the date of issue. At the expiration of said period such diploma may be converted into a life certificate, provided that the character of the work done by the holder thereof, and his or her moral character, shall meet with the approval of the Superintendent of Public Instruction of the State of Arkansas."

The only degree given by the University of Arkansas which in itself entitles the holder to teach in the schools of this state, or of other states requiring professional preparation of its teachers, is the degree of Bachelor of Science in Education. Graduates holding other degrees are required to pass examinations for teachers' certificates, unless they also have certificates granted by the College of Education for not less than thirty-six hours of professional work, which must include twelve hours of practice teaching under supervision.

A student who intends to take a degree in another college of the University should register in that college. If, in addition, he expects to take the teacher's certificate in the College of Education, he must also be registered in the College of Education during the terms in which he is doing his strictly professional work—Education 130, 131 and 240—as the course is at present arranged. All students are advised to do their practice teaching as late in the college course as possible.

It sometimes happens that the student finds it necessary to engage in teaching after his second year in college. Such student, in order to secure the teacher's certificate at the end of the Sophomore year, must be registered in the College of Education during both the Freshman and Sophomore years. If he intends eventually to take a degree in some other college, he may also register in that College during the freshman and sophomore years.

Students in other colleges, who expect to receive the teacher's certificate at some time in the college course, are advised to consult with the dean of the College of Education not later than the end of the freshman year.

The teacher's certificate is granted to students in the College of Education who have completed the work for their degree, and to those also of its students who have completed one of the following courses: (I) the two-year regular course; (II) the two-year special course in manual training; or (III) the special course in shop work.

## I

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily at least one hundred and two credit hours in approved courses as prescribed in the following course of study.

*Freshman Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 131 (132) (133).....	3	3	3
Psychology 140 .....	4	--	--
Education 130 .....	3	--	--
Education 140 .....	--	4	--
Education 131 .....	--	3	--
Military Art (or) Physical Education .....	1	1	1
*Elective .....	6	6	13
	<u>17</u>	<u>17</u>	<u>17</u>

*Sophomore Year*

Subject	CREDIT HOURS		
	TERM FALL	TERM WINTER	TERM SPRING
Education 240 .....	4	4	4
Military Art (or) Physical Education.....	1	1	1
*Elective .....	12	12	12
	<u>17</u>	<u>17</u>	<u>17</u>

\*To be chosen with the advice and consent of the department in which the candidate wishes to secure a recommendation to teach, so as to include not less than ten credit hours in Education and Psychology.

## II

The candidate must meet the entrance, residence, and registration requirements and must complete at least one hundred and two credit hours as outlined in the following course of study:



*Freshman Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Psychology 140 .....	4	--	--
Education 130 .....	3	--	--
Education 140 .....	--	4	--
Education 131 .....	--	3	--
Mathematics S .....	5	5	5
Mechanic Arts 123 (124) (125) .....	2	2	2
Civil Engineering 121 (122) (123) .....	2	2	2
Trade Courses Cb .....	--	--	7
Military Art .....	1	1	1
	<hr/> 17	<hr/> 17	<hr/> 17

*Sophomore Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 131 (132) (133) .....	3	3	3
Education 240 .....	4	4	4
Trade Course Ba .....	3	3	3
Trade Course Db .....	3	3	3
Drawing 221 (222) (223) .....	2	2	2
Military Art .....	1	1	1
Education Elective .....	4	4	4
	<hr/> 17	<hr/> 17	<hr/> 17

*RECOMMENDATION BUREAU*

The College of Education maintains a Recommendation Bureau, the purpose of which is to place properly in teaching positions those of its students and graduates whose teaching ability is satisfactory to the faculty of this college and whose major professors concur in this recommendation. Since such recommendations are worthless unless based on personal knowledge, the Bureau manifestly cannot place its services at the disposal of teachers concerning whose teaching ability the members of the staff of critic teachers know nothing. It is still possible to find positions for primary and grade teachers who possess a certificate given at the close of two years of college work. It is not possible, however, to place high school teachers in good positions unless they have earned a college degree. Every year there are many more requests for teachers than there are graduates available. Graduates need not leave the state to secure important positions at good salaries. Students looking forward to teaching in other states should, however, confer with the dean as to the require-

ments for teaching in such states. In general the requirement is a minimum of twenty-seven term hours of academic work following a course in General Psychology.

### *VOCATIONAL TEACHER TRAINING*

The University of Arkansas has been designated by the Federal government as the institution in which all the teacher training in the State of Arkansas under the Smith-Hughes Act shall be done. A Department of Vocational Teacher Training has been established in the College of Education; there have been added to the faculty, also, a professor of agricultural education, a professor of education in the trades and industries, a professor of home economics education, and three critic teachers to supervise the practice teaching of students. Other professionally trained critic teachers will be added to the faculty as soon as any considerable body of students is enrolled in the later years of the courses involved.

It is the intention both of the Federal Board, as well as of the Arkansas Board which will have charge of the Smith-Hughes work, that teachers who prepare themselves for the work by graduation from any one of the courses given below, shall be employed for an entire year rather than for a few months only and shall receive liberal salaries. A certain amount of practical experience will be required in addition to college graduation. The courses given below in detail are tentative only and probably will be slightly altered from time to time as experience makes necessary.

It is worthy of note that the vocational training courses planned by the University of Arkansas comprised the first state scheme to be approved by the Federal Board.

Candidates for admission to these courses must present fifteen units of high school work or the equivalent. Students taking work for a degree in the College of Agriculture may fit themselves to become teachers of Smith-Hughes agricultural work by taking the necessary courses in the College of Education to obtain the teachers' certificate. During the time that such persons are taking their professional work in Education, they must be registered both in the College of Agriculture and in the College of Education. They may, on the other hand, be candidates for the degree of Bachelor of Education in the College of Education, with agriculture as a major. Not later than the beginning of the Junior year, and earlier if possible, students expecting to teach agriculture should consult with the Professor of Agricultural Education with regard to the arrangement and selection of courses. The teacher training in vocational agriculture may be taken only by persons who have had at least two years' vocational agricultur-

al experience, or who are acquiring such experience as a part of their training. Each one of these courses covers four college years and is especially prepared for teachers of these respective vocational subjects. Each course consists of two hundred and four term hours of work, a certain part of which must be in scientific project work in the vocation involved, and twenty-nine or thirty term hours in professional subjects, including practice teaching.

### THE FOLLOWING PROFESSIONAL COURSES ARE AN UNVARYING REQUIREMENT

Psychology	242	Psychology of Teaching .....	4 term hours
Education	130	The Teaching Process .....	3 term hours
Education	131	Observation and Curriculum .....	3 term hours
Education	240	Practice Teaching .....	12 term hours
Education	250	Principles of Secondary Education .....	5 term hours
Education	250	or 233, or Home Economics 341,	
		Vocational Methods Course .....	2 or 3 term hours

### VOCATIONAL TEACHER TRAINING IN TRADES AND INDUSTRIES

Teacher training in trades and industries is given for the purpose of preparing teachers for the various types of work in industrial schools. The requirements for certification in the various lines of work are not the same. The entrance requirements and courses of study are accordingly different, although having much in common.

#### ENTRANCE REQUIREMENTS

##### 1. *For Shop Teachers of Unit Trade Courses.*

Grammar school graduation or its equivalent is required as a minimum educational qualification. In addition, a period of not less than one year beyond a period of apprenticeship recognized by the trade as adequate is required as a minimum of trade contact.

Candidates for admission to this course must satisfy those in charge of Teacher Training in Trades and Industries that they have the necessary personal qualifications and experience to pursue satisfactorily the course of study.

##### 2. *Teachers of Related Subjects.*

a. High school graduation or its equivalent.

b. The University will also provide opportunity for persons of character and are otherwise capable of pursuing the course of with less than high school education, providing they have force study.

## COURSES OF STUDY

1. *For Shop Teachers of Unit Trade Courses.*

Those who meet the entrance requirements for this course may pursue a special course which will be made prominent during the summer session. Upon satisfactory completion of the following subjects, together with evidence of proficiency in the trade, a certificate entitling the holder to teach that particular trade will be issued by the State Board of Education.

1. Principles of teaching industrial subjects..... 3 hours
2. History and theory of industrial education..... 3 hours
3. Organization and administration of industrial education ..... 3 hours
4. Practice teaching ..... 3 hours

2. *Teachers of Related Subjects.*

Those who desire to prepare specifically for the teaching of related subjects will be required to complete one of the following courses:

a. Any of the regular courses leading to the degrees of Bachelor of Science in Mechanical, Electrical or Mining Engineering, with the requirement that the allowed elective or extra subjects taken must include:

1. History and Theory of Industrial Education..... 3 term hours
2. Principles of Teaching Industrial Subjects..... 3 term hours
3. Principles of Teaching Related Subjects..... 6 term hours
4. Practice Teaching ..... 3 term hours
5. Organization and administration of industrial education, or Industrial History, or Elementary Sociology ..... 3 term hours

b. The regular course leading to the degree of Bachelor of Science in Education with the requirement that the major be taken in the College of Engineering, the minor in science or mathematics, and the special work under (a) above be taken as part of the professional course.

## FOUR-YEAR COURSE IN VOCATIONAL HOME ECONOMICS TRAINING.

*Freshman Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 131 (132) (133) .....	3	3	3
Chemistry 141 (142) (143) .....	4	4	4
Home Economics 131 (132) (133) .....	3	3	3
Art 124 (125) (126) .....	2	2	2
Physical Education 111 (112) (113) .....	1	1	1
Education 140 .....	..	..	4
Elective .....	4	4	..
	17	17	17

*Sophomore Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Zoology 241 (242) (243 or Botany 141) .....	4	4	4
Home Economics 231 (232) (233) .....	3	3	3
Chemistry 241, 242 .....	4	..	4
Physical Education 211 (212) (213) .....	1	1	1
Psychology 242 .....	..	4	..
Elective .....	5	5	5
	17	17	17

*Junior Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Home Economics 331 (332), 334 .....	3	3	3
Home Economics 234 (235) (236) .....	3	3	3
Home Economics 221 (222) (223) .....	2	2	2
Bacteriology 342 .....	4	..	..
Education 250, 130 .....	..	8	..
Home Economics 340, 341 .....	..	..	8
Economics 340 .....	4	..	..
	16	16	16

*Senior Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Home Economics 361 .....	6	..	..
Home Economics 441 (442) (443) .....	4	4	4
Education 260 .....	..	6	6
Home Economics 335 (336) .....	3	3	..
Elective .....	3	3	6
	16	16	16

## FOUR-YEAR COURSE IN VOCATIONAL AGRICULTURAL EDUCATION.

*Freshman Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Chemistry 141 (142) (143).....	4	4	4
Botany 141 (142) .....	4	4	..
Zoology 143 .....	..	..	4
English 131 (132) (133) .....	3	3	3
Horticulture 141 .....	4	..	..
Agronomy 141 .....	..	4	..
Animal Husbandry 141 .....	..	..	4
Mechanic Arts 111 (112) .....	1	1	..
Drawing 111 .....	..	..	1
Military Art 111 (112) (113) .....	1	1	1
	17	17	17

*Sophomore Year*

Subject	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Physics 241 (242) .....	4	4	..
Horticulture 244 .....	4	..	..
Soil Physics (Agronomy 241, 242) .....	..	4	4
Farm Dairying (Animal Husbandry 241) .....	..	4	..
Stock Judging (Animal Husbandry 242) .....	..	..	4
Chemistry 241 (242) (244) .....	4	4	4
Mathematics 247 .....	4	..	..
Agricultural Chemistry 231.....	..	..	3
Civil Engineering 213 .....	..	..	1
Military Art 211 (212) (213) .....	1	1	1
	17	17	17

*Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 331 (332) (333) .....	3	3	3
Farm Crops (Agronomy 341, 342, 343) .....	4	4	4
Agricultural Economics (430, 431, 432).....	3	3	3
Psychology of Teaching 242 .....	4	..	..
Teaching Process (Education 130) .....	..	3	..
Observation and Curriculum (Education 131)....	..	..	3
*Elective .....	3	4	4
	17	17	17



*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Farm Management (Agronomy 431, 432, 433) .....	3	3	3
Principles Secondary Education (Education 250)....	5	--	--
Vocational Agricultural Education 236 (237).....	--	3	3
Practice Teaching .....	4	4	4
*Elective .....	4	6	6
	16	16	16

\*To be chosen from courses approved by the candidate's major professor, so as to insure a broad general knowledge of agriculture, with an opportunity for a degree of specialization.

## DEPARTMENTAL STATEMENTS

## SYMBOLS

The courses are numbered in accordance with the system described on page 61.

## CREDIT HOURS

The number of credit hours allowed in each course is identical with the number of hours of lecture or recitation hours a week through the term; in laboratory, shop, or field work two or three hours is considered as equivalent to one hour of lecture or recitation.

## EDUCATION

PROFESSOR BUCK, PROFESSOR GIVENS, PROFESSOR HOTZ, PROFESSOR JEWELL, PROFESSOR JORDAN, PROFESSOR MATTHEW, PROFESSOR PALMER, ASSISTANT PROFESSOR GRANT, MRS. BATEMAN, DR. BOOTH, MISS COWAN, MISS HILL, MISS SUTTON, MISS WILSON

*Requirements for a Major in Education*, forty-eight credit hours, including courses Psychology 140, Education 140, 130, 131 and 240.

Psychology 140 should be taken as a preparation for all other courses. Students preparing to teach should complete in addition Psychology 142, Psychology 230 or 240, Education 230 and 132. No student will be recommended for a position in high school who has not had Psychology 231 or Education 250. No student will be recommended for a supervisory position who has not completed Education 132, or 231, or 232, and always 242. As

a preparation for the ministry courses 230, 240, 245, and 243 in the department of Psychology are recommended; for the study of law, Psychology 140 and 240 and Philosophy 230 and 231; and for the study of medicine, Psychology 140 and 241.

## COURSES

**Psychology**

No.	Title	Credits	Prerequisites
140	General Psychology .....	4	None
141	Advanced Psychology .....	4	See statement
142	Educational Psychology .....	4	140 or 141
143	Experimental Psychology .....	4	140 or 141
*220	Vocational Psychology .....	2	140 or 141
*230	Genetic Psychology .....	3	140 or 141
*245	Psychology of Adolescence .....	4	140 or 141
*240	Social Psychology .....	4	140 or 141
*241	Abnormal Psychology .....	4	140 or 141
242	Psychology of Teaching .....	4	None
*243	Psychology of Religion .....	4	140 or 141
244	Psychology of Elementary School Subjects	4	140 or 141
*241	Physiological Psychology .....	4	140 or 141
*342	Advanced Physiological Psychology	4	140, 141 or 341

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**Education**

130	The Teaching Process .....	3	None
131	Observation and the Curriculum .....	3	140 and 130
132	School Management .....	3	140
133	Rural School Management .....	3	None
134	School Hygiene .....	3	None
140	History of Education .....	4	None
124 (125)	(126) Public School Music .....	6	None
150	Primary Methods .....	5	None
*236 (237)	Methods and Materials in Vocational Agriculture .....	6	Advice of the Department.
*230	Philosophy of Education .....	3	Psychology 140 or 141
			Education 140 and 130
*231	Administration of City and County Schools	3	See Statement
*232	High School Administration .....	3	See Statement
*233	Principles of Teaching Applied to Trades Courses .....	3	Advice of the Department
*235	Industrial Education .....	3	140
230, 240, 260	Practice Teaching .....	12	140, 130, 131
*241	Comparative School Systems ..	4	140
*242	Educational Tests and Measurements	4	Psychology 140 or 141
			Education 140 or 130
243	Science Teaching .....	4	Advice of Dean
*244	Public School Administration .....	4	See Statement.
*245	Statistical Methods .....	4	Psychology 140 or 141
			Education 242
*246	Vocational Guidance .....	4	None
*250	Principles of Secondary Education .....	5	140, 130, 131
*330	Rural Educational Sociology .....	3	None
340	Advanced Teaching .....	4	140, 130, 131, 240
341	Home Economic Methods .....	4	331-2-3, 234-5-6, Education 250, 130

**Philosophy**

*230 Logic . . . . .	3	Psychology 140 or 141
*231 Ethics . . . . .	3	Psychology 140 or 141

\*May be taken for graduate credit.

**PSYCHOLOGY**

140. **GENERAL PSYCHOLOGY.**—An introduction to the field of general psychology, dealing with the simpler aspects of mental life. Designed to ground the student in the fundamentals of the subject and to enable him to acquire a right attitude toward human behavior in general. Lectures and recitations four hours a week.

**PROFESSOR JORDAN.**

141. **ADVANCED PSYCHOLOGY.**—Technical, scientific psychology, designed especially for those students who desire subsequently to take the course in the Psychology of the Abnormal, or for those students who are contemplating the study of medicine. Emphasis will be placed on the study of the psycho-physical equipment of the human being, and the fundamental principles of psycho-physical behavior will be stressed. Transferred credit for high school psychology will not admit to this course, which, rather than 140, should be taken if course 241 is to follow. Lectures and recitations four hours a week.

**PROFESSOR JORDAN.**

142. **EDUCATIONAL PSYCHOLOGY.**—A consideration of the following topics of vital importance to the teacher: sources of interest, instincts, habits, moral training, memory, thinking, attention, imagination, and "transfer of training." Lectures and recitations four hours a week.

**PROFESSOR JORDAN.**

143. **EXPERIMENTAL PSYCHOLOGY.**—To acquaint the student with the experimental method and its technique, and to give him some first-hand information concerning the laws of psychology. Such problems in the learning process will be experimented upon which have a direct bearing on sensory motor and perceptual learning, and on memory, imagination, reasoning, etc. Prerequisite, General Psychology. Lectures and laboratory four hours a week.

**PROFESSOR JORDAN.**

220. **VOCATIONAL PSYCHOLOGY.**—Some attention will be given to the history of the more important vocations and to the manner in which selections have in the past been made for them. There follows a complete study of the principal occupations and

of the peculiar needs to be met by those attempting to fill them, with due emphasis on the methods now employed in determining the fitness of these individuals for the different professions. Lectures and recitations two hours a week.

PROFESSOR JEWELL.

230. **GENETIC PSYCHOLOGY.**—An intensive study of the development of the mind from childhood to adolescence with a consideration of the arguments for and against the recapitulation theory. In studying the principles of child psychology, a careful interpretation is made of both hereditary and environmental influences in their bearing upon education in the home and in the school. Lectures and recitations three hours a week.

PROFESSOR JEWELL.

245. **PSYCHOLOGY OF ADOLESCENCE.**—The important physical, mental, and moral changes which are natural to adolescence, of special interest to all who have to deal with boys and girls of high school age. Attention will be given to laying the foundation for the pedagogy of secondary instruction. Lectures and recitations four hours a week. Offered each Summer Term.

PROFESSOR JEWELL.

240. **SOCIAL PSYCHOLOGY.**—A study of public opinion, custom, imitation, psychology of leadership, conflict, discussion, compromise, mob mind, social will, communication and the crowd. This course will give an insight into present social problems by showing how consciousness has been developed in home, school, neighborhood, and society. Lectures and recitations four hours a week.

PROFESSOR JORDAN.

241. **PSYCHOLOGY OF THE ABNORMAL.**—The psycho-physical conditions and mental phenomena of illusions, hallucinations, dreams, sleep, automatisms, somnambulism, hypnotism, suggestion, dissociation, double and multiple personalities, and the insanities proper. Open only to juniors and seniors, who must have had at least course 140 or 141. High school psychology will not be accepted for admission into this course. Lectures, discussions, and reports four hours a week throughout one term.

PROFESSOR JORDAN.

242. **PSYCHOLOGY OF TEACHING.**—A special course for students in the various Smith-Hughes courses, which will deal with the topics usually studied in General Psychology, but always with reference to the learning process. It will be very practical, and the applications of the laws of psychology to teaching will be stressed. Lectures and recitations four hours a week.

PROFESSOR JEWELL.

243. **PSYCHOLOGY OF RELIGION.**—Presented from the standpoint of the growth of religious consciousness in the individual rather than in the race. The treatment is two-fold. After a thorough consideration of the various phases of conversion, the same topics are studied again as elements of a spontaneous religious development. Lectures and recitations four hours a week.

PROFESSOR JEWELL.

244. **PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS.**—The psychological processes involved in the learning of reading, writing, arithmetic, history and geography. The laws of habit formation are applied in arranging the material in these subjects. Prerequisite, Psychology 140. Lectures and recitations three hours a week.

PROFESSOR JORDAN.

341. **PHYSIOLOGICAL PSYCHOLOGY.**—Intended for those students who are expecting to do extensive work in psychology. A thorough study of the nervous system, and general attempt to trace out in the nervous system the various processes of consciousness. Prerequisite, Psychology 140. Lectures and recitations four hours a week.

PROFESSOR JORDAN.

342. **ADVANCED PHYSIOLOGICAL PSYCHOLOGY.**—A continuation of 341. The sensations, perception, learning, thinking, etc., are taken up from the physiological point of view. Prerequisites, Psychology 140 and 341.

PROFESSOR JORDAN.

## EDUCATION

130. **THE TEACHING PROCESS.**—An introduction to the scientific principles underlying teaching. The aim of education, the chief factors in education, types of teaching, methods of study, duties and responsibilities of teachers. Text-book, lectures and recitations three hours a week.

PROFESSOR HOTZ.

131. **OBSERVATION AND THE CURRICULUM.**—Closely related to 130. Topics considered are: organization in school work, grading and promotion, the daily schedule, selection and organization of material, and methods of motivation. Observations and discussions of recitations in elementary and secondary school work with considerable attention given to working out a suitable course of study. Text-book, lectures, references, and discussions three hours a week.

PROFESSOR HOTZ.

132. **SCHOOL MANAGEMENT.**—The qualifications of the teacher, grading and promotion, recitation, discipline, study and prepara-

tion, school incentive, and the school and the community, designed for prospective grade school teachers. Text-book, lectures, and references, three hours a week.

PROFESSOR JEWELL.

133. RURAL SCHOOL MANAGEMENT.—Designed to make both the aim and methods of conducting a rural school very definite; especially for those rural teachers who have had little opportunity to see better schools than their own. The enrichment of the life of the country child will be kept in mind, and topics such as plays and games, study program, agriculture in the school, and the problems relating especially to the rural school, will be considered. Text-book, lectures, and references, three hours a week. Offered each Summer Term.

PROFESSOR JEWELL.

134. SCHOOL HYGIENE.—Problems of school hygiene, including heating, lighting, and ventilating, school diseases and medical inspection of schools, and hygiene of various school activities. Text-book, lectures, and references three hours a week.

PROFESSOR JEWELL.

140. HISTORY OF EDUCATION.—Educational tendencies rather than men will be the content of this course. Stress will be laid upon the connection between educational theory and actual school work in its historical development. Lectures and recitations four hours a week.

PROFESSOR JEWELL.

124 (125) (126). PUBLIC SCHOOL MUSIC.—A course preparatory to teaching music in the public schools. Two meetings each week are given to sight reading and one to a careful study of the methods of teaching the subject to children.

MRS. BATEMAN.

150. PRIMARY METHODS.—The guiding principles that determine in general what the primary program should include. Methods of teaching the various branches of the primary curriculum are considered and observation of classwork in the Training School through the fourth grade is included. Text-book, lectures and observation, five hours a week.

MISS WILSON.

Special Methods courses in Language, Numbers, Reading, and Grammar Grade Subjects are offered in each summer school.

236 (237). METHODS AND MATERIALS IN VOCATIONAL AGRICULTURE.—A study of the specific problems that confront the teacher of Agriculture. History of the Smith-Hughes movement; selec-



tion of subject matter suited to local conditions; laboratory, field and home projects; laboratory and library equipment; use and management of school farm; community and extension work. Lectures, with references and recitations, three hours a week.

PROFESSOR MATTHEW,

PROFESSOR BUCK.

230. **PHILOSOPHY OF EDUCATION**—Education considered from the standpoint of (1) biology, (2) neurology, (3) psychology, (4) anthropology, and (5) sociology; representative topics; instinct, heredity, habit, culture-epochs, individual differences, imitation, suggestion, training and memory, imagination, emotions, will, senses, motor activities and moral nature, formal discipline, educational values, social education. Lectures and recitations three hours a week.

PROFESSOR JEWELL

231. **ADMINISTRATION OF COUNTY AND CITY SCHOOLS**.—The educational needs of the county and city; the financial support of the schools; distribution of responsibility and authority among principals, superintendents, boards of education; a comparison of representative school systems. For prospective principals and superintendents. Prerequisite, Education 130, 131; or in the case of teachers of wide experience, the permission of the instructor. Textbook, lecture, discussions, and thesis, three hours a week.

PROFESSOR HOTZ.

232. **HIGH SCHOOL ADMINISTRATION**.—The classification, grading, and promotion of pupils; discipline; finances; direction of "Student Activities", relations with private organizations; the responsibility and authority of teachers, heads of departments, supervisors and principals. For prospective high school teachers and principals. Prerequisite, Education 130, 131; or in the case of teachers of wide experience, the permission of the instructor. Textbook, references, lectures, and discussions three hours a week.

PROFESSOR HOTZ.

233. **PRINCIPLES OF TEACHING APPLIED TO TRADES COURSES**.—A careful study of the principles which underlie trade analysis as well as a study of the fundamental principles underlying teaching and their special application to Industrial Education. Practical problems in trade analysis, courses of study and the method of presentation of subject matter. Lectures and recitations three hours a week.

PROFESSOR GIVENS.

235. **INDUSTRIAL EDUCATION**—The meaning and significance of industrial education. Consideration will be given to Federal

and State legislation affecting industrial education, the policies of the Federal Board for Vocational Education, as well as the development of the movement. Lectures and recitations three hours a week.

PROFESSOR GIVENS.

240. PRACTICE TEACHING.—Daily teaching of one period in the Training School in practical application of the principles of instruction. Teachers' meeting one hour a week.

ASSISTANT PROFESSOR GRANT,  
DR. BOOTH,  
PROFESSOR BUCK,  
MISS COWAN,  
PROFESSOR PALMER,  
MISS SUTTON,  
MISS WILSON.

241. COMPARATIVE SCHOOL SYSTEMS.—The outstanding features of the school systems of France, Germany, England, Denmark, Switzerland, and the United States. Planned for those interested in the working out of the curriculum and a better supervision of the schools. The changes in education that the Great War has brought to England and Germany, and its probable effect on the United States, are largely emphasized. Text-book, lectures, and references, four hours a week.

PROFESSOR JEWELL.

242. EDUCATIONAL TESTS AND MEASUREMENTS.—The critical study of scientific methods employed in measuring school room instruction. Special attention is given to the consideration of standard tests and scales for the measuring of educational attainments together with the technique of applying these to educational products. Practice will be given in applying tests in oral and silent reading, spelling, penmanship, comprehension, arithmetic, English composition, and algebra. Four hours a week.

PROFESSOR JORDAN.

243. SCIENCE TEACHING.—Designed for students planning to teach the natural sciences in the high school. An attempt to show how the results of experimental and educational psychology may be applied to the teaching of science. A close study of the fundamental principles and methods of teaching of the several sciences in the high school curriculum. Especial attention will be given to the application of these principles and the "scientific method" in teaching of chemistry, physics, biology and general science. Lectures and recitations four hours a week.

PROFESSOR HALE.

244. **PUBLIC SCHOOL ADMINISTRATION.**—The educational organization of state, city, and county; distribution of responsibility and authority among boards of education, superintendents, principals and teachers; selection, tenure and promotion of teachers; attendance; school costs and accounting; records and reports; a comparison of representative school systems. For prospective principals and superintendents. Prerequisite, Education 130, 131; or in the case of teachers of wide experience, the permission of the instructor. Textbook, lecture, discussions, and reports four hours a week.

PROFESSOR HOTZ.

245. **STATISTICAL METHODS.**—Follows Education 242. It treats such subjects as the construction of tests, the process of correlation, the normal curve of probability, and the other processes necessary for the comprehension of the statistics involved in modern education. Prerequisite, Psychology 140, Education 242. Lectures and recitations four hours a week.

PROFESSOR JORDAN.

246. **VOCATIONAL GUIDANCE.**—Designed especially for prospective teachers in Junior or Senior High Schools, or for those intending to engage in any kind of school administration. Study of the Vocational Guidance movement in the United States, in its relation to education and industry. Analysis of the specific problems of Vocational guidance with which the teacher will have to deal, including a study of the various vocations, the natural inclination of the child, the methods of assisting the child in finding himself in the light of his natural inclinations, and his knowledge of the field of vocations. Textbook, references, and lectures, four hours a week.

PROFESSOR BUCK.

250. **PRINCIPLES OF SECONDARY EDUCATION.**—Dealing with the development and nature of the secondary school as we have it today, and with the fundamental aims of secondary education; the relation of secondary education to elementary and higher education; causes of retardation and elimination of pupils; present day problems; purpose and relative importance of the different subjects in the program of studies; and the cardinal principles of organization and management in so far as they affect the work of the teacher. For prospective high school teachers. Text-book, references, reports and discussions, five hours a week.

PROFESSOR HOTZ.

340. **ADVANCED TEACHING.**—An additional semester of practice teaching, offered for those advanced students who desire to gain greater proficiency in the technique of class room procedure

and management. Should not be elected without the advice of the head of the department.

ASSISTANT PROFESSOR GRANT.

341. HOME ECONOMICS METHODS.—The treatment of methods for teaching foods and clothing. Discussion of the development of the home economics movement, courses of study, current textbooks, the method of demonstration. Lectures and recitations four hours a week.

PROFESSOR PALMER.

Zoology 533, Biology Teaching, see page 112.

English 745, Teaching of English, see page 82.

Mathematics 534, Teaching of Mathematics, see page 100.

Physics, 521 (522) (523), Teaching of Physics, see page 107.

German 737 (738) (739), Teachers' Course, see page 93.

## PHILOSOPHY

230. LOGIC.—The application of logic to the practical problems of everyday life, including a careful study of inductive and deductive reasoning, with special reference to argumentation and debate. This course is designed to give a foundation for future philosophical study. Lectures and recitations three hours a week.

PROFESSOR JORDAN.

231. ETHICS.—This course, after some attention to the growth of ethics in history, will confine itself largely to helping the student acquire better methods of estimating and controlling conduct. Studies will be made of the moral problems that have confronted people from primitive times to the present, and of comparisons between individual and group morality. Lectures and recitations three hours a week.

PROFESSOR JORDAN.

# COLLEGE OF ENGINEERING

The purpose of the course in this college is to prepare young men for the profession of engineering. The value of the training acquired in a university course is recognized by railway officials, manufacturers, municipal, state, and federal authorities. The demand in industrial and engineering fields throughout the country is for college graduates.

The graduates of the College of Engineering of the University of Arkansas are scattered over the entire world, occupying positions of trust in foreign lands, in the service of the United States government, in large manufacturing, and in state and municipal service, or are building for themselves reputations as professional engineers.

## ADMISSION

For a detailed statement of the entrance requirements and a description of the subjects accepted for entrance, see page 27.

## COURSES OF STUDY

The College of Engineering offers through its various departments four year courses leading to the degrees of *Bachelor of Chemical Engineering*, (B. Ch. E.), *Bachelor of Civil Engineering*, (B. C. E.), *Bachelor of Civil Engineering in Highways*, (B. C. E. in Highways), *Bachelor of Electrical Engineering*, (B. E. E.), *Bachelor of Mechanical Engineering*, (B. M. E.), and *Bachelor of Mining Engineering*, (B. Mi. E.); graduate and professional courses leading to the degrees of *Chemical Engineer*, (Ch. E.), *Civil Engineer*, (C. E.), *Electrical Engineer*, (E. E.), and *Mechanical Engineer*, (M. E.); and special one year courses leading to a certificate.

Candidates for bachelors' degree in engineering must meet the entrance, residence, and registration requirements, and must complete satisfactorily two hundred sixteen term hours as outlined in the following courses of study.

Elective courses will not be given unless as many as five students who have completed the required undergraduate course register for them.

# FRESHMAN AND SOPHOMORE YEARS FOR ALL ENGINEERING STUDENTS

## Freshman Year

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Physics 144 (145) (146).....	4	4	4
English 141 (142) (143).....	4	4	4
Mathematics 157.....	5	..	..
Mathematics 156.....	..	5	..
Mathematics 128.....	..	..	2
Mathematics 139.....	..	..	3
Drawing 121 (122) (123).....	2	2	2
Mechanic Arts 121 (122) (123).....	2	2	2
Military Art 111 (112) (113).....	1	1	1
	<hr/> 18	<hr/> 18	<hr/> 18

## Sophomore Year

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Mathematics 256.....	5		
Mathematics 251 (252).....		5	5
Chemistry 257 (258) (259).....	5	5	5
Drawing 221 (222) (223).....	2	2	2
Civil Engineering 251.....	5		
Experimental Engineering 232, 225.....		5	..
Electrical Engineering 231, 221.....			5
Military Art 221 (222) (223).....	1	1	1
	<hr/> 18	<hr/> 18	<hr/> 18

# REQUIREMENTS FOR THE DEGREE OF CHEMICAL ENGINEERING

## Junior Year

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Chemistry 354 (355) (359).....	5	5	5
Chemistry 254, 255.....	5	5	..
Heat Power Engineering 341 (342) (343).....	4	4	4
*Elective .....	4	4	9
	<hr/> 18	<hr/> 18	<hr/> 18



*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Chemistry 434, 435 (436).....	3	3	3
Chemistry 451 (452), 453.....	5	5	5
*Elective .....	10	10	10
	18	18	18

\*All electives must be chosen with the consent of the head of the Department of Chemistry and the Dean of the College of Engineering. Of these electives 12 hours must be chosen from other courses in chemistry and at least 9 hours in English or a foreign language.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF CIVIL ENGINEERING

*Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
H. P. Engineering 341 (342) (343) .....	4	4	4
Civil Engineering 342, 323.....	..	4	1
Civil Engineering 312, 313 .....	..	1	3
Civil Engineering 352.....	5	..	..
Civil Engineering 343.....	..	..	4
Civil Engineering 331 (332) (333).....	3	3	3
Geology 331.....	3	..	..
Civil Engineering 335.....	..	3	..
Elective .....	3	3	3
	18	18	18

*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Civil Engineering 451, 431.....	3	3	..
Civil Engineering 435.....	..	3	..
Civil Engineering 443.....	..	..	4
Civil Engineering 436 (437) (428).....	3	3	2
Civil Engineering 432.....	..	3	..
Civil Engineering 433 .....	..	..	3
Civil Engineering 543 .....	4	..	..
Civil Engineering 438 .....	..	3	..
Civil Engineering 434 .....	..	..	3
Civil Engineering 439 .....	..	..	3
Civil Engineering 430.....	3	..	..
Elective .....	3	3	3
	18	18	18

# REQUIREMENTS FOR DEGREE IN BACHELOR OF CIVIL ENGINEERING IN HIGHWAYS

## Junior Year

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Civil Engineering 342, 323-S.....	..	4	1
Civil Engineering 312, 323-S.....	..	1	3
Civil Engineering 352.....	5	..	..
H. P. Engineering 341 (342) (343) B.....	4	4	4
Civil Engineering 331 (332) (333) S.....	3	3	3
Geology 331.....	3	..	..
Civil Engineering 335 H. E.....	..	3	..
Civil Engineering 343-S.....	..	..	4
Elective .....	3	3	3
	18	18	18

## Senior Year

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Civil Engineering 451-431.....	5	3	..
Civil Engineering 435.....	..	3	..
Civil Engineering 432 H. E.....	..	..	3
Civil Engineering 436 (437) (428).....	3	3	2
Civil Engineering 432.....	..	3	..
Civil Engineering 433.....	4	..	..
Chemistry 441 (442) (443).....	4	4	4
Civil Engineering 438 (419).....	..	2	1
Civil Engineering 434.....	..	..	3
Civil Engineering 422 H. E.....	2	..	..
Civil Engineering 435-S. H. E.....	..	..	3
Elective .....	..	..	2
	18	18	18

# REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ELECTRICAL ENGINEERING

## Junior Year

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Heat Power Engineering 341 (342) (343)....	4	4	4
Electrical Engineering 331 (332) (333).....	3	3	3
Electrical Engineering 321 (322) (323).....	2	2	2
Electrical Engineering 324 (325) (326).....	2	2	2
Heat Power Engineering 331 (332) (333).....	3	3	3

*Elective .....	4	4	4
	<u>18</u>	<u>18</u>	<u>18</u>

*Suggested Electives:*

Experimental Engineering 321 (322) (323) .....	2	2	2
English 331 (332) (333) .....	3	3	3
Military Art 521 (522) (523) .....	2	2	2
Physics 531 (532) .....	3	3	1
Chemistry 231 (232) .....	3	3	..
French 141 (142) (143) .....	4	4	4
Spanish 141 (142) (143) .....	4	4	4
Experimental Engineering 322 .....	..	2	..
Electrical Engineering 334 .....	..	..	3

*Senior Year*

## CREDIT HOURS

Course	FALL TERM	WINTER TERM	SPRING TERM
Electrical Engineering 431 (432) (433) .....	3	3	3
Electrical Engineering 421 (422) (423) .....	2	2	2
Electrical Engineering 424 (425) (426) .....	2	2	2
Heat Power Engineering 451 .....	5	..	..
Electrical Engineering 417 (418) (419) .....	1	1	1
Electrical Engineering 451 .....	..	5	..
Civil Engineering 434 .....	..	..	3
Economics 436 .....	..	..	3
*Electives .....	5	5	4
	<u>18</u>	<u>18</u>	<u>18</u>

*Suggested Electives:*

Electrical Engineering 441 (442) (443) .....	4	4	4
Electrical Engineering 434, 435 .....	3	..	3
Military Art 531 (532) (533) .....	3	3	3
Advanced Electrical Engineering Laboratory 521 (522) (523) .....	2	2	2

\*To be chosen with the advice and consent of the candidate's major professor.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MECHANICAL ENGINEERING

*Junior Year*

## CREDIT HOURS

Course	FALL TERM	WINTER TERM	SPRING TERM
Heat Power Engineering 341 (342) (343) .....	4	4	4
Electrical Engineering 331 (332) .....	3	3	..
Electrical Engineering 321 (322) .....	2	2	..
Experimental Engineering 321 (322) (323) .....	2	2	2
Civil Engineering 343 .....	..	..	4
Drawing 341 .....	4	..	..
Heat Power Engineering 344 (345) .....	..	4	4

Heat Power Engineering 331 (332) (333).....	3	3	3
*Elective .....	..	..	1
	<hr/> 18	<hr/> 18	<hr/> 18

*Senior Year*

## CREDIT HOURS

Course	FALL TERM	WINTER TERM	SPRING TERM
Electrical Engineering 451.....	..	5	..
Heat Power Engineering 451.....	5	..	..
Economics .....	..	..	3
Experimental Engineering 344, 345.....	4	4	..
Experimental Engineering 423, 437.....	..	..	5
Experimental Engineering 347 (348) .....	..	4	4
Civil Engineering 434.....	..	..	3
Thesis .....	..	..	3
*Elective .....	6	5	..
	<hr/> 18	<hr/> 18	<hr/> 18

\*To be chosen with the advice and consent of the head of the department.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MINING ENGINEERING

*Junior Year*

## CREDIT HOURS

Course	FALL TERM	WINTER TERM	SPRING TERM
Civil Engineering 251 (256).....	5	5	..
Electrical Engineering 231, 221.....	..	..	5
Geology 231, 232 (233).....	3	3	3
Geology 531 (532).....	3	3	..
Chemistry 251 (254) (255).....	5	5	5
Mining 321 (322) (323).....	2	2	2
*Elective .....	..	..	3
	<hr/> 18	<hr/> 18	<hr/> 18

*Senior Year*

## CREDIT HOURS

Course	FALL TERM	WINTER TERM	SPRING TERM
Geology 334.....	3	..	..
Geology 337, 338.....	..	3	3
Mining 431 .....	3	..	..

Heat Power Engineering 341 (342) (343).....	4	4	4
Mining 434.....	..	3	..
Metallurgy 436.....	3	..	..
Metallurgy 428.....	..	..	2
Chemistry 533.....	..	..	3
*Elective .....	6	9	7
	19	19	19

\*To be chosen with the advice and consent of the candidate's major professor.

## REQUIREMENTS FOR THE GRADUATE AND PROFESSIONAL DEGREES IN ENGINEERING

The graduate degrees of *Chemical Engineer*, *Civil Engineer*, *Electrical Engineer*, and *Mechanical Engineer* are granted to students who have completed the required undergraduate course and, in addition, at least one year of graduate work in residence. This graduate work must include one major subject, based on the undergraduate course pursued, and two minor subjects, one or both of which must be closely related to the major subject. The candidate must complete not less than forty-five term credit hours in approved courses and must submit an acceptable thesis in his major subject presenting the results of original research.

The professional degrees of *Chemical Engineer*, *Civil Engineer*, *Electrical Engineer*, and *Mechanical Engineer* are also conferred upon graduates of the University of Arkansas who have been in successful practice of their profession for at least three years, two of which must have been done after receiving the bachelor's degree. The candidate must have been in responsible charge of work as principal or assistant for at least one year. In addition to this he must present an acceptable thesis giving the results of original research.

The candidate must submit, in writing, to the Committee on Scholarship of the College of Engineering a statement of his professional record, the names of at least three references, and the subject of his thesis, not later than January 1 of the college year in which the degree is sought. The completed thesis must be in the hands of the Committee on Scholarship not later than May 20, of the same year.

All senior engineering students, accompanied by instructors, are required, during the spring term, to make a visit of inspection to power plants, manufacturing plants, and noted engineering works. All engineering students will be required to spend one week in actual field practice in surveying during the junior year.

## TRADE COURSE IN ELECTRICAL AND MECHANICAL ENGINEERING

The following course is offered to students who have at least a grammar school education and who desire to prepare themselves better for advancement in the trades or who desire to become familiar with the care, operation, and repair of some line of machinery. The course is intended to give the student a working knowledge of steam, gas, and electrical machinery, in addition to his shop training.

Upon the satisfactory completion of two years of work, a certificate will be issued.

### COURSE OF STUDY, FIRST YEAR

#### *Fall Term*

		HOURS	
		Recitation	Practice
(41)	Steam Boilers .....	4	4
(44)	Elementary Electricity .....	4	4
(11)	Drawing .....	..	4
(20)	Shop work .....	..	8

#### *Winter Term*

		HOURS	
		Recitation	Practice
(42)	Steam Engines .....	4	4
(45)	Direct Current Machinery.....	4	4
(12)	Drawing .....	..	4
(20)	Shop Work .....	..	8

#### *Spring Term*

		HOURS	
		Recitation	Practice
(43)	Gas Engines .....	4	4
(46)	Alternating Current Machinery.....	4	4
(13)	Drawing .....	..	4
(20)	Shop Work .....	..	8

### SECOND YEAR

#### *Fall Term*

		HOURS	
		Recitation	Practice
	Electrical Machinery and Laboratory.....	4	4
	Steam and Gas Machinery and Laboratory.....	4	4
	Technical Drawing .....	..	4
	Shop Work .....	..	4



*Winter Term*

	HOURS	
	Recitation	Practice
Electrical Machinery and Laboratory.....	4	4
Steam and Gas Machinery and Laboratory .....	4	4
Technical Drawing .....	..	4
Shop Work .....	..	4

*Spring Term*

	HOURS	
	Recitation	Practice
Electrical Machinery and Laboratory.....	4	4
Steam and Gas Machinery and Laboratory .....	4	4
Technical Drawing .....	..	4
Shop Work .....	..	4

The above outline is not a fixed course, but indicates the amount of work required. Substitutions may be made by consent of the instructor concerned and the Dean.

## COURSE IN AUTOMOBILE MECHANICS

During the school year three courses of twelve weeks each will be offered in Automobile Mechanics. These courses are for the automobile owner, garage man, farm tractor or truck operator, and will consist of seven hours of practical work and one hour of lecture work a day.

The course will be sufficiently flexible to meet the needs of students of various degrees of proficiency. Those students who have had one or more years of practical experience can take advanced work in the various divisions, while elementary instruction will be given to those whose knowledge is limited. The lectures accompanying the courses are not technical and do not require a knowledge of mathematics.

A tuition fee of \$60.00 per course will be charged. This fee will include all necessary expenses connected with the course. The University will furnish materials and tools. The student will pay for his own text books, board, lodging and personal expenses.

*Description of Courses* The course will be divided into four parts as follows:

Part 1. Engine work. Part 2. Chassis work. Part 3. Ignition, starting and lighting work. Part 4. Machine shop and forging.

Each student will be given instruction in all four parts.

## DEPARTMENTAL STATEMENTS

## SYMBOLS

The numbers of the regular college courses contain three digits; the first indicates the college year, the second digit the number of hours credit per week; the third digit, the particular course.

These numbers are distributed as follows:

101 to 199—Courses which are open to freshmen.

201 to 299—Courses which are required of sophomores in one or more of the colleges, or elective for sophomores, juniors, or seniors.

301 to 399—Courses which are required of juniors in one or more of the colleges, or elective for juniors and seniors.

401 to 499—Courses which are required of seniors in one or more of the colleges, or elective for seniors.

501 up —Open electives for sophomores, juniors and seniors. Courses with double or triple numbers, as English 141 (142) (143), run through two or three terms, respectively, and credit will not be allowed until the final term's work is completed.

## CREDIT HOURS

The number of credit hours allowed in each course is identical with the number of hours of lecture or recitation hours per week through the semester; in laboratory, shop, or field work two to three hours is considered as equivalent to one hour of lecture or recitation.

## CIVIL ENGINEERING

PROFESSOR STOCKER, ASSISTANT PROFESSOR SPENCER, MR. POLAND

The requirements for a degree are outlined on pages 137-138.

The courses in civil engineering include theoretical instruction accompanied by illustrations and as much of engineering practice as possible. Much time is devoted to practice in the field, drafting room and laboratory, this work being carried on parallel with the class work. Each year a party of Engineering students goes into camp one week for practice in surveying and railway loca-

tion. The courses will give the student a knowledge of fundamental principles that will enable him to enter intelligently upon professional practice.

### HIGHWAY ENGINEERING.

In recent years many problems have arisen in connection with the construction and maintainance of highways, creating a demand for men who have been trained for this particular branch of engineering. The course in highway engineering has been arranged to aid in training engineers for this work.

In the last two years subjects especially related to highway engineering have been introduced, and other subjects, which are considered of less importance in highway work, have been dropped from the regular course in civil engineering.

A well equipped laboratory has been provided for making all the standard tests in accordance with the practice of the United States Office of Public Roads.

### COURSES

No.	Title	Credits	Prerequisites
335	Highways .....	3	None
251	Surveying .....	5	Math. 156
352	Surveying .....	5	251
213	Leveling and Farm Drainage....	1	Math 156
342, 313	Railroad Engineering .....	5	251-352
312, 330	Field Practice .....	4	251-352
430	Railroad Economics.....	3	342-313
331, 332, 333	Technical Drawing .....	9	Draw. 221-3
343	Hydraulics .....	4	H. P. 341-343
435	Bridge Design .....	3	H. P. 341-343
443	Bridge Design .....	4	435
432	Sanitary Engineering .....	3	343
433	Waterworks Engineering.....	3	343
543	Engineering Laboratory .....	4	343 H. P. 341-3
434	Contracts and Specifications.....	3	†
436, 437, 428	Masonry and Reinforced Concrete .....	8	H. P. 341-343
439	Surveying and Astronomy.....	3	342, 313, 312, 333
422	Highway Engineering.....	2	335, 352
435 H. E.	Highway Materials Laboratory	3	335, 343
432 H. E.	Highway Bridges .....	3	331-3, 491
451, 431	Roof and Bridge Stresses .....	8	341-343
438	Thesis.		

† See statement.

312 (330). Problems and practice in the location of simple and transition curves; turnouts; measurements of cuts and fills; setting slope stakes and making computations for volumes.

ASSISTANT PROFESSOR SPENCER.

**RAILROAD SURVEY.**—Actual field practice in reconnoissance, preliminary surveys, location and topographical survey. One week, twelve hours a day. Required of juniors.

ASSISTANT PROFESSOR SPENCER.

331. **DRAWING.**—Computations and drawing of topographical maps from actual surveys. Drawing practice nine hours per week.

ASSISTANT PROFESSOR SPENCER.

332 (333). **DRAWING.**—Elementary graphic statics and detail drawing of simple wood and steel roof trusses. Drawing practice nine hours per week.

ASSISTANT PROFESSOR SPENCER.

343. **HYDRAULICS.**—A study of the theory of hydraulics; principles of hydrostatic and hydrodynamic pressures; stream gauging; water measuring devices. Lectures and recitations four hours a week.

ASSISTANT PROFESSOR SPENCER.

213. **LEVELING AND FARM DRAINAGE.**—A course in leveling, land surveying, and farm drainage, designed for students in the course in agriculture. Lectures and recitations one hour the first part, and field practice three hours a week the second part, of the term.

PROFESSOR STOCKER.

436 (437). **MASONRY AND REINFORCED CONCRETE.**—A study of stone and brick masonry; plain and reinforced concrete; deep foundations; dams; retaining walls and reinforced concrete structures. Lectures and recitations three hours per week.

ASSISTANT PROFESSOR SPENCER.

428. **CONCRETE DESIGN.**—Design of reinforced concrete structures. Drawing practice six hours per week.

ASSISTANT PROFESSOR SPENCER.

342 (313). **RAILWAY SURVEYING.**—A study of preliminary surveys and location; simple, vertical and transition curves; turn-outs and cross-overs and estimates of earthwork and materials of construction. Five hours of credit.

ASSISTANT PROFESSOR SPENCER.

430. **RAILWAY ECONOMICS.**—A study of the economics of railway location and maintainance. Recitations three hours per week.

ASSISTANT PROFESSOR SPENCER.

435. **HIGHWAY ENGINEERING LABORATORY.**—Tests of gravel and broken stone to determine hardness, toughness, cementing power,

and resistance to abrasion; rattler tests and absorption test for paving brick; tests of sand and clay; inspection and tests of bituminous materials. Laboratory practice six hours per week.

ASSISTANT PROFESSOR SPENCER.

543. ENGINEERING LABORATORY.—Tests of strength and other properties of materials of construction; tensile and crushing tests of brick and stone; standard tests on Natural and Portland cements and tests to determine the effect of graded and ungraded aggregates on concrete.

ASSISTANT PROFESSOR SPENCER.

439. ADVANCED SURVEYING.—Problems in triangulation, topographic surveys, precise leveling and practical astronomy. Three hours of credit.

ASSISTANT PROFESSOR SPENCER

251. ELEMENTARY SURVEYING.—General surveying intended to meet the needs of all engineering students; covering the care and use of tape, level and transit; exercises in the field including land surveying, leveling, public land surveys, and the adjustment of instruments. Lectures and recitations three hours a week and field practice six hours a week.

PROFESSOR STOCKER AND MR. -----

352. SURVEYING.—The use, care and adjustments of level, transit, solar attachment, plane table and sextant; methods employed in topographic, land, city, mine, and hydrographic surveying, map making and calculations from field notes. Lectures and recitations three hours a week and field practice six hours a week.

PROFESSOR STOCKER.

335. HIGHWAYS.—The location, design, construction and maintenance of earth, gravel, broken stone, concrete and bituminous macadam roads. Lectures and recitations three hours a week.

PROFESSOR STOCKER.

422. HIGHWAYS.—Proper design, construction and maintenance of city streets and pavements. Some time is devoted to a study of road laws, taxes, bond issues, and assessments. Lectures and recitations two hours a week.

PROFESSOR STOCKER.

451, 431. ROOF AND BRIDGE STRESSES.—Computation of stresses in roofs and simple bridge trusses, chiefly by analytical methods. Special attention is given to the subject of train loads for railway bridges.

PROFESSOR STOCKER.

435. **BRIDGE DESIGN.**—Complete design with detailed drawings and estimates of weight and cost of a plate girder.

PROFESSOR STOCKER.

443. **BRIDGE DESIGN.**—Complete design with detailed drawings and estimates of weights and costs of a riveted or pin connected railway bridge.

PROFESSOR STOCKER.

432. **SEWERAGE.**—Municipal sewage disposition. Computations of quantities of sanitary and storm sewage, design of separate and combined systems of sewers, design of sewage purification works, and a study of ultimate disposition of sludge and effluents. Financial, legal and pathological considerations of sanitation. Lecture and recitations three hours a week.

MR. POLAND.

433. **WATERWORKS.**—Public water supplies. Examination of sources of supply, computation of quantities required, design of reservoirs and purification plants, and design of distribution systems. Financial, legal and pathological considerations of municipal water supply. Lecture and recitations three hours a week.

MR. POLAND.

432. **HIGHWAY BRIDGES.**—Problems in the design of highway bridges, determination of waterways, construction and maintenance of highway bridges and culverts. Lectures and recitations three hours a week.

PROFESSOR STOCKER.

434. **ENGINEERING CONTRACTS AND SPECIFICATIONS.**—Legal aspect of contract and specification forms, and instruments for advertisements, proposals, contracts and bonds; specifications for various kinds of work and materials. Lectures and recitations three hours a week.

PROFESSOR STOCKER.

438. **THESIS.**—Each senior or graduate student, candidate for a degree, is required to submit the subject of his thesis not later than December 15, and the completed thesis not later than May 10, to a committee consisting of the candidate's major professor and two other members appointed by the president for its criticism and approval. All theses must be neatly written on one side of plain white paper, eight by ten inches in size, leaving a one-inch margin. When drawings or diagrams are used they should be made to conform to these dimensions or some multiple of them. The first page of the thesis should contain the title, the following statement: "Thesis submitted by-----to the faculty of the University of Arkansas in partial fulfillment of the require-



ments for the degree of.....," and the date. Theses submitted for bachelor's degrees must be at least 2,500 words in length.

PROFESSOR STOCKER.

## ELECTRICAL ENGINEERING

PROFESSOR GLADSON, PROFESSOR STELZNER, MR. TEAGUE.

The requirements for a degree are outlined on page 138.

The courses in this department seek to combine general and technical subjects in such proportions as to furnish a good foundation for the profession of electrical engineering. Sufficient theory is taught in the class-room and illustrated by laboratory experiments to give the student a knowledge of the underlying principles. Shop experience with manufacturing companies to give the student specific practical training, is desirable. Such training should be obtained during vacations and after graduation.

### COURSES

No.	Title	Credits	Prerequisites
231	Elements of Electrical Engineering .....	3	Physics 142
221	Electrical Engineering Laboratory.....	2	•
331 (332)	Dynamo Electric Machinery .....	6	E. E. 231
321 (322)	Electrical Engineering Laboratory.....	4	•
333	Dynamo Electric Machinery.....	3	E. E. 331, 332
323	Electrical Engineering Laboratory .....	2	•
314 (315) (316)	Electrical Engineering Design .....	3	E. E. 231
334	Illuminating Engineering.....	3	E. E. 332
431 (432) (433)	Alternating Currents and Alternating Current Machinery.....	9	E. E. 333 and Math. 252
421 (422) (423)	Electrical Engineering Laboratory.....	6	•
424 (425) (426)	Electrical Engineering Design.....	6	•
441	Hydro-Electric Engineering .....	4	
434	Telephony .....	3	E. E. 231
451	Electrical Equipment of Power Plants .....	5	
435	Telegraphy .....	3	E. E. 231
442	Electric Railways .....	4	E. E. 333
427	Electrical Engineering Seminar.....	2	
511	Inspection Trip .....	0	
417 (418) (419)	Thesis .....	3	
443	Electric Transmission and Distribution .....	4	
521 (522) (523)	Advanced Electrical Engineering Laboratory .....	2	

\*See statement.

231. ELEMENTS OF ELECTRICAL ENGINEERING—Introductory course to the study of electrical engineering, including recitations and demonstrations on electric and magnetic circuits and machines. Measuring instruments, their use and calibration. Lec-

tures and recitations three hours a week. Spring term. Prerequisite: Physics 142.

MR. TEAGUE.

221. ELECTRICAL ENGINEERING LABORATORY.—Laboratory course to accompany electrical engineering 241. Laboratory practice four hours a week. Spring term.

MR. TEAGUE.

331 (332). DYNAMO ELECTRIC MACHINERY.—Direct and alternating current machinery with their general applications. Lectures and recitations three hours a week. Fall and winter terms. Prerequisite. Electrical Engineering 241.

PROFESSOR STELZNER.

321 (322). ELECTRICAL ENGINEERING LABORATORY.—Electrical and magnetic measurements, use and calibration of instruments; testing of direct and alternating current machinery. Laboratory practice four hours a week. Fall and winter term. To accompany Electrical Engineering 331 (332).

PROFESSOR STELZNER,

MR. TEAGUE.

333. DYNAMO ELECTRIC MACHINERY.—Lectures, recitations and problems devoted to the principles underlying the construction and performance of electrical machinery. Lectures and recitations three hours a week. Spring term. Prerequisite. Electrical Engineering 331 (332).

PROFESSOR STELZNER.

323. ELECTRICAL ENGINEERING LABORATORY.—The study of technical electrical measurements and dynamo electric machinery to accompany Electrical Engineering 343. Laboratory practice four hours a week. Spring term.

MR. TEAGUE,

PROFESSOR STELZNER.

314 (315) (316). ELECTRICAL ENGINEERING DESIGN.—Design problems for direct current machinery. Calculations and drawing practice three hours a week. Prerequisite: Electrical Engineering 231.

MR. TEAGUE,

PROFESSOR STELZNER.

334 ILLUMINATING ENGINEERING.—Electric light wiring and the different methods of artificial illumination; sources, intensity and distribution of light; physiological and hygienic problems; direct and indirect lighting; reflecting surfaces; illumination and

photometric calculations. Lectures and recitations three hours a week. Spring term. Prerequisite: Electrical Engineering 332.

PROFESSOR STELZNER.

431 (432) (433). ALTERNATING CURRENTS AND ALTERNATING CURRENT MACHINERY.—Lectures, recitations and problems on alternating current circuits and machinery. Three hours a week. Prerequisites: Electrical Engineering 333; Mathematics 252.

PROFESSOR STELZNER.

421 (422) (423). ELECTRICAL ENGINEERING LABORATORY.—A series of laboratory exercises to accompany Electrical Engineering 431 (432) (433). Laboratory practice four hours a week.

PROFESSOR STELZNER,

MR. TEAGUE.

424 (425) (426). ELECTRICAL ENGINEERING DESIGN.—Design problems for alternating current machinery. Calculations and drawing practice four hours a week. To be preceded or accompanied by Electrical Engineering 431 (432) (433).

PROFESSOR STELZNER AND MR. TEAGUE.

441. HYDRO-ELECTRICAL ENGINEERING.—Methods of investigating power possibilities for flowing water, collecting data, selecting power sites, designing dams, power house, transmission lines, and machinery. Lectures and recitations four hours a week. Fall term. This course must be preceded or accompanied by Electrical Engineering 431 (432) (433).

PROFESSOR GLADSON.

434. TELEPHONY.—The principal systems of telephony in practical use. Three hours a week. Fall term. Prerequisite: Electrical Engineering 231.

MR. TEAGUE.

451. ELECTRICAL EQUIPMENT OF POWER PLANTS.—Selection of electrical machinery for power stations; station construction, operation, and management. Lectures and recitations five hours a week. Winter term.

PROFESSOR GLADSON.

435. TELEGRAPHY.—The principal system of wire and wireless telegraphy in practical use. Three hours a week. Spring term. Prerequisite: Electrical Engineering 231.

MR. TEAGUE.

442. ELECTRICAL RAILWAYS.—Application of electricity to the propulsion of street cars and railway trains. The selection, equipment, and study of the various systems of electric traction.

Lectures, recitations, and problems four hours a week. Winter term. Prerequisite: Electrical Engineering 323.

PROFESSOR STELZNER.

427. ELECTRICAL ENGINEERING SEMINAR.—Students who attend and take part in at least three-fourths of the meetings of the University of Arkansas Branch of the American Institute of Electrical Engineers during their junior and senior years, and who prepare and present an acceptable original paper on some engineering subject, will be allowed two term credit hours.

417 (418) (419). THESIS.—Each senior, or graduate student, candidate for a degree, is required to submit the subject of his thesis not later than December 15, and the completed thesis not later than May 10, to a committee, consisting of the candidate's major professor and two other faculty members appointed by the dean, for its criticism and approval. All theses must be neatly typewritten on one side of plain white paper, eight by ten inches in size, leaving a one-inch margin. When drawings or diagrams are used, they should be made to conform to these dimensions or some multiple of them. The first page of the thesis should contain the title and the following statement: "Thesis submitted by-----to the faculty of the University of Arkansas in partial fulfillment of the requirements for the degree of-----," and the date. Theses submitted for bachelor's degrees must be at least 2,500 words in length. Three term hours of credit.

PROFESSOR GLADSON.

443. ELECTRIC TRANSMISSION AND DISTRIBUTION OF POWER.—Modern methods of transmission and distribution of electric power. Four hours. Spring term.

PROFESSOR GLADSON.

521 (522) (523). ADVANCED ELECTRICAL ENGINEERING LABORATORY.—A special course of laboratory exercises in power measurements, use of oscillograph and special problems. Laboratory practice four hours a week.

PROFESSOR STELZNER.

## MECHANICAL ENGINEERING

There are two departments in Mechanical Engineering: Experimental Engineering and Drawing; and Heat Power Engineering and Mechanical Arts.

The requirements for a degree are outlined on page 139.

Mechanical Engineers are in demand in various lines of en-

gineering work, such as consulting engineering; power plant designing, constructing, and operating; designing, constructing, erecting, operating, and testing all kinds of machinery; manufacturing; engineering salesmanship; heating and ventilating engineering; and efficiency engineering.

The course in mechanical engineering is designed to give the student a broad foundation in the subjects that are of the greatest importance in his work, a technical education in his chosen field made practical by shop and laboratory courses, and, in electives, a certain amount of specialization and cultural development. It is believed that such a course will enable the student to be of immediate value to his employer and that it will insure certain advancement in his profession.

## EXPERIMENTAL ENGINEERING AND DRAWING

PROFESSOR WILSON, MR. POLAND

### COURSES

#### Experimental Engineering

No.	Title	Credits	Prerequisites
225	Mechanical Laboratory .....	2	None
232	Engines and Boilers .....	3	None
321 (322) (323)	Mechanical Laboratory.....	6	225
344	Industrial Engineering.....	4	None
345	Industrial Engineering .....	4	None
347 (348)	Heating and Ventilation.....	8	232
422	Mechanical Laboratory.....	2	225
423	Mechanical Laboratory .....	2	225 Heat Power 342
437	Refrigeration .....	3	232
449	Thesis .....	4	None

#### Drawing

111 (112) (113)	Agricultural Drawing .....	3	None
121 (122) (123)	Mechanical Drawing .....	6	None
221 (222) (223)	Mechanical Drawing .....	6	123
341	Kinematics .....	4	223

225. MECHANICAL LABORATORY.—An elementary course in laboratory work, designed to acquaint the student with the use and operation of power plant equipment. One lecture and three hours laboratory work a week.

PROFESSOR WILSON.  
MR. POLAND.

232. **ENGINES AND BOILERS.**—Introductory study of engines, boilers and auxiliaries, to familiarize the student with power plant equipment. Three hours a week.

PROFESSOR WILSON.

321 (322) (323). **MECHANICAL LABORATORY.**—Exercises in the calibration of engineering instruments, such as indicators, planimeters, nozzles and meters; valve setting, efficiency tests of steam engines and boilers. Laboratory four hours a week. This course must be preceded or accompanied by Heat Power Engineering 331 (332) (333).

PROFESSOR WILSON.

344. **INDUSTRIAL ENGINEERING.**—The development and the application of the principles of industrial organization and administration. Four hours a week.

PROFESSOR WILSON.

345. **INDUSTRIAL ENGINEERING.**—Cost systems, time studies, safety engineering and fire protection. Lectures and recitations three hours a week. One period of drawing or laboratory a week.

PROFESSOR WILSON.

347 (348). **HEATING AND VENTILATION.**—The theory of heating and ventilation. The students make working drawings of the different types of heating plants and prepare estimates. Two recitations and two drawing periods a week.

PROFESSOR WILSON.

423. **MECHANICAL LABORATORY.**—Properties of engineering materials investigated experimentally. Complete test of some power or pumping plant. Special investigations. Four hours of laboratory a week.

PROFESSOR WILSON.

437. **REFRIGERATION.**—The theory of the absorption and compression systems of ice making, and of ice making machinery and insulation. Lectures and recitations three hours a week.

PROFESSOR WILSON.

449. **THESIS.**—Each senior or graduate student, who is a candidate for a degree, is required to submit the subject of his thesis not later than December 15, and the completed thesis not later than May 10, to a committee, consisting of the candidate's major professor and two other members appointed by the president, for its criticism and approval. All theses must be neatly typewritten on one side of plain white paper, eight by ten inches in size, leaving a one-inch margin. When drawings or diagrams are used they should be made to conform to these dimensions



or some multiple of them. The first page of the thesis should contain the title, the following statement: "Thesis submitted by ----- to the faculty of the University of Arkansas in partial fulfillment of the requirements for the degree of -----", and the date. Theses submitted for bachelor's degrees must be at least 2,500 words in length.

PROFESSOR WILSON.

#### DRAWING COURSES

111 (112) (113). AGRICULTURAL DRAWING.—Elementary principles of mechanical drawing, exercises in free hand lettering, and drawing of farm structures. Drawing practice three hours a week.

MR. POLAND.

121 (122) (123). MECHANICAL DRAWING.—Instruction in the selection, use and care of instruments, lettering, sketching, and working drawings. The latter half of this course is devoted to elementary Descriptive Geometry. The problems are assigned and worked out in the drawing room. Six hours of drawing practice a week.

MR. POLAND.

221 (222) (223). MECHANICAL DRAWING.—Elementary course in mechanical drawing, including lettering, technical sketching of machine parts, detail and assembly drawing, tracing and blue-printing, perspective and isometric drawing, topographical drawing, and empirical machine design. Drawing practice six hours a week.

PROFESSOR WILSON.

341. KINEMATICS.—Investigation of the means by which motion is transmitted in machines and of the principles underlying the design of gears, cams, and similar mechanical devices. Two recitations and six hours of drawing a week.

PROFESSOR WILSON.

# HEAT POWER ENGINEERING AND MECHANIC ARTS

PROFESSOR BAENDER, MR. JONES, MR. DINWIDDIE, MR. HULL

## COURSES

### Heat Power Engineering

No.	Title	Credits	Prerequisites
341 (342) (343)	Theoretical Mechanics .....	12	Mathematics 251 (252)
344 (345)	Machine Design .....	8	341 (342) (343)
331 (332) (33)	Heat Power Engineering .....	9	Physics 241 (242) (243), Math. 251 (252)
451	Mechanical Equipment of Power Plants.....	5	331 (332) (333)
452	Engine and Boiler Design....	5	344 (345), 332 (33)
417 (418) (419)	Thesis .....	3	

### Mechanic Arts

121 (122) (123)	General Shop .....	6	None
111 (112) (113)	Carpentry and Forge .....	3	None
124 (125) 126	Manual Training .....	6	None
421	Advanced Shop .....	2	121 (122) (123)

### HEAT POWER ENGINEERING

341 (342) (343). **THEORETICAL MECHANICS**.—Statics and dynamics, including a mathematical discussion of inertia, energy, and similar topics. A study will also be made of the materials of construction including the mathematical development of the formulae for calculating the strength of beams, columns, and shafting, with numerous practical problems illustrating the theory involved. Lectures and recitations four hours a week.

PROFESSOR BAENDER.

344 (345). **MACHINE DESIGN**.—The kinematics of machinery, gear wheels, and link motion. Designs will be made of complete lathes, punches, and similar machines. Complete working drawings will be made, including the application of theory to practical problems. This course must be preceded or accompanied by course 341 (342) (343). Lectures and recitations two hours a week, drawing six hours a week.

PROFESSOR BAENDER.

331 (332) (333). **HEAT POWER ENGINEERING**.—The thermodynamic theory underlying heat engines and its application to the steam and gas engines; valves and valve gears are analyzed by the valve diagrams. A study will also be made of boilers, superheaters, and the properties of saturated and superheated steam. Lectures and recitations three hours a week.

PROFESSOR BAENDER.

451. MECHANICAL EQUIPMENT OF POWER PLANTS.—Instruction in the selection of machinery for power plants, coal handling, and ash-handling. A special study will be made of the characteristics of operation of the various types of prime movers and auxiliaries under variable loads so that equipment best adapted for the problem at hand may be selected. Lectures and recitations five hours a week. This course must be preceded by course 331 (332) (333).

PROFESSOR BAENDER.

452. ENGINE AND BOILER DESIGN.—The mechanics of engines and boilers with problems illustrating the thermo-dynamic theory underlying the design. This course must be preceded by course 331 (332) (333). Elective, five hours a week.

PROFESSOR BAENDER.

417 (418) (419). THESIS.—Each senior or graduate student, who is a candidate for a degree, is required to submit the subject of his thesis not later than December 15, and the completed thesis not later than May 10, to a committee, consisting of the candidate's major professor and two other members appointed by the president, for its criticism and approval. All these must be neatly typewritten on one side of plain white paper, eight by ten inches in size, leaving a one-inch margin. When drawings or diagrams are used they should be made to conform to these dimensions or some multiple of them. The first page of the thesis should contain the title and the following statement: "Thesis submitted by.....to the faculty of the University of Arkansas in partial fulfillment of the requirements for the degree of.....," and the date. Theses submitted for bachelor degrees must be at least 2,500 words in length.

PROFESSOR BAENDER.

#### MECHANIC ARTS

121 (122) (123). GENERAL SHOP PRACTICE.—General course in shop work, including practice in joinery, the use and care of wood-working tools with proper methods in sharpening them, and the making of patterns and core boxes; foundry practice in moulding in green sand, melting and pouring brass and iron, and core-making; forge practice in the management of fires, drawing, welding, forging, and annealing and tempering of tools; machinery, shop practice including bench work in chipping and filing, and practical exercises in turning, thread-cutting, planing, drilling, grinding, and general repairing of machinery. Shop practice six hours a week.

MR. DINWIDDIE,  
MR. JONES,  
MR. HULL.

111 (112) (113). **CARPENTRY AND FORGE PRACTICE.**—General course in shop-work designed especially for students in agriculture, including the use and care of woodworkings tools, grinding and sharpening edge tools, setting and filing saws. Instruction in sawing, quarter-sawing and seasoning lumber, board measure and stock dimensions; commercial methods of handling lumber, the construction of modern farm buildings; preparing lists of material, plain roof framing, and use of steel square. Forge work, including exercises in upsetting, drawing out, bending, twisting, welding and tempering. Shop practice three hours a week.

MR. DINWIDDIE,

MR. HULL.

124 (125) (126). **MANUAL TRAINING.**—Joinery, cabinet-making, and wood-turning with emphasis on the care, use, and proper methods of sharpening tools; designed especially for prospective teachers in manual training. Shop practice twelve hours a week.

MR. DINWIDDIE.

421. **ADVANCED SHOP PRACTICE.**—Advanced work in machine shop and patternmaking, including the lathe, planer, and milling machine. Special attention is given to the making of tools and complicated patterns. In this course special attention is given to the introduction of modern shop methods and time study. Shop practice six hours a week.

MR. JONES.

#### TRADE COURSE

(20). **SHOP WORK.**—Each student is required to work at least eight hours a week in the shop. He will be assigned to the kind of work thought to be best suited to train him for the work that he proposes to follow after completing the course.

11 (12) (13). **ELEMENTARY MECHANICAL DRAWING.**—Free-hand lettering, practice and use of instruments. Sketching of machine parts, and the making of working drawings from sketches, tracing, and blue-printing. Four or eight hours drawing practice a week.

44. **ELEMENTS OF ELECTRICITY.**—The fundamental laws of the electric and magnetic circuits are treated in such a manner as to give the student sufficient knowledge to understand their applications met with in practice. Fall term. Class work, four hours a week. Laboratory practice, four hours a week.

45. **DIRECT CURRENT MACHINERY.**—Types of generators and motors, their characteristics, applications and care. Control

equipment and measuring instruments. Winter term. Class work, four hours a week. Laboratory practice, four hours a week.

46. **ALTERNATING CURRENT MACHINERY.**—Types of generators and motors, their characteristics, applications and care. Control equipment and measuring instruments. Spring term. Class work, four hours a week. Laboratory practice, four hours a week.

41. **STEAM BOILERS AND ACCESSORIES.**—The elementary principles of steam boiler operation and care, types of boilers and furnaces, boiler feed pumps, injectors and feed water heaters are studied and at the same time the student gets actual practice in handling equipment in the laboratory and boiler room. Class work, four hours a week. Laboratory practice, four hours a week.

42. **STEAM ENGINES.**—The elementary theory of the steam engine and the care and operation of various types are studied and compared. The equipment in the Experimental Engineering Laboratory is used for practice in the use of the indicator, operating and adjusting engines, setting valves and for running simple tests. Class work, four hours a week. Laboratory practice, four hours a week.

43. **GAS ENGINES.**—Designed to familiarize the student with the principles underlying the action of gas and oil engines. The action of the different types of carburetors is explained and demonstrated. Actual operation of gas and oil engines is taught in the laboratory. Class work, four hours a week. Laboratory practice, four hours a week.

## MINING ENGINEERING

PROFESSOR DRAKE

The requirements for a degree are outlined on page 140. The course is planned so as to give the major instruction in geology, mining engineering, and chemistry, with minor work in civil, mechanical, and electrical engineering.

The practical work of mining, metallurgy, and ore dressing can be learned so much more readily at practical work than but little laboratory work in these lines is offered. Students are expected, however, to spend parts of at least two summer vacations at ordinary day work in some mine, mill, or smelter where they will be expected to ask questions of the workmen, keep notes of their observations, and compute the costs of some detailed operations.

While this course is not unduly exacting, it is severe and should be undertaken only by students well prepared mentally and physically.

## COURSES

### Mining Engineering

No.	Title	Credits	Prerequisites
321 (322) (323)	Details of Mining Operations	6	None
434	Ore Dressing .....	3	None

### Metallurgy

436	General Metallurgy .....	3	None
428	Assaying .....	2	Chem. 255

### MINING ENGINEERING

321 (322) (323). DETAILS OF MINING OPERATIONS.—Excavating, drilling, blasting, driving shafts, adits, and drifts, stoping, timbering, hoisting, draining, and transporting. Lectures and recitations two hours a week.

PROFESSOR DRAKE.

434. ORE DRESSING.—General principles and theory of ore dressing, cleansing, crushing, sizing, and classifying, jigging, table concentrating, and stamp milling of gold and silver ores, with description of typical ore dressing works. Lectures and recitations three hours a week.

PROFESSOR DRAKE.

### METALLURGY

436. GENERAL METALLURGY.—Elementary study of fuels and furnaces and the metallurgy of iron, steel, copper, lead, silver, and gold. Lectures and recitations three hours a week.

PROFESSOR DRAKE.

428. ASSAYING.—Fire assaying of various classes of ores and furnace products of gold, silver, and lead. Laboratory work one afternoon a week with occasional lectures and recitations.

PROFESSOR DRAKE.



# General Extension Division.

DR. A. M. HARDING, *Director*

The business of the modern university is to serve not only a group of qualified resident students but all the people in the commonwealth supporting that university. In order to reach people living at a distance the Extension Service has been established by the University of Arkansas. The Extension Service is made up of an Agricultural Extension Division and a General Extension Division.

The General Extension Division represents the colleges of Arts and Sciences, Education, and Engineering, and in an effort to help "carry the University to the people," the work of the Division has been divided into two groups, the Extension Teaching Service and the Public Welfare Service.

## 1. EXTENSION TEACHING SERVICE

The purpose of the Extension Teaching Service is "adult education." It is through this branch of the Extension Service that the University proposes to reach those citizens of the state who cannot register as resident students. By means of correspondence study, class study, club study, extension lectures, and lyceum courses, the Extension Teaching Service offers the services of the faculties of the state University to those men and women who cannot spare the time for resident study.

**CORRESPONDENCE STUDY**—By means of correspondence study courses the entire teaching force of the University is placed at the disposal of the people of the state. Most of these courses carry credit toward a University degree; some of them carry high school credit. A number of well-directed reading courses, in many instances covering practically the same ground but not carrying credit, are available for those who wish to fit themselves better for their occupation or to spend their leisure hours reading for culture. Through correspondence study and attendance at one or more regular sessions, students who cannot spare the time for residence during four years may secure a University degree. Special courses for teachers and reading courses for club women are also offered.

**CLUB STUDY**—Club study has been designed to afford associated groups of people, particularly teachers and club women, an opportunity to study, read, and get in touch with the latest thought on cultural or professional subjects. It provides a

definite plan for cooperative study. Upon request a course of reading is outlined by a faculty member and a text book is selected as a basis for study. An outline containing a full list of references together with suggested topics for special papers, reports, etc., is furnished. Through the secretary the progress of the club is reported to the instructor in charge who receives and criticises the special papers and answers all questions.

Courses in education, literature, social science, hygiene, home economics, political science, and art are now offered.

**CLASS STUDY.**—Wherever possible, if funds will permit, Extension classes in technical or cultural subjects may be organized. These classes will be supervised by faculty members from the University and will usually meet at night.

**EXTENSION LECTURES.**—An Extension Lecture Bureau is maintained. Through this bureau the General Extension Division arranges for lectures to be given by prominent professional men, ministers, state officials and university professors, on a wide range of subjects. These lectures are technical, informational, and inspirational, and are suited for the programs of organizations, such as women's clubs, business men's leagues and other associations, as well as for institutes, conventions, commencement exercises and holiday programs. Lecturers in most cases do not charge a fee, but with few exceptions their expenses must be paid.

**LYCEUM COURSES.**—The winter lecture or lyceum course is an educational feature in which every one is especially interested, and, following the example of all the large universities, the General Extension Division proposes to furnish school men or local committees with lecture course talent at cost. In doing this the General Extension Division will simply get an option on a number of engagements for professional concert companies and entertainers and will act as a clearing house for these dates. In this way much can be saved on the cost of the local lecture course.

Dealing in talent is a legitimate business for the University, first, because a lecture course is recognized as an educational institution and a necessity in most places and, if the General Extension Division can, it is only a duty to help reduce the cost. Secondly, the saving made by cooperative buying through the General Extension Division can be turned into some other good things for the community.

## II. PUBLIC WELFARE SERVICE

Through the Public Welfare Service of the General Extension Division cooperative assistance will be given to clubs, societies,

public boards and other agencies working for public good or community betterment.

**LANTERN SLIDES AND MOTION PICTURES.**—By cooperating with the bureaus and departments of the United States Government, and large corporations, the General Extension Division can supply clubs, schools, and communities with slides and motion picture reels, either for instruction or entertainment. Lecture outlines accompany many of the sets of slides.

Fine sets of slides on travel, including "Seeing America," South America, the Islands of the Sea, Alaska, Mexico, Cuba, Holland, Italy, Russia, Sweden, Spain, Scotland, Switzerland, China, India, Japan, Korea, Algiers, Egypt, and South Africa, are available, as well as some very good sets on agriculture, animals, architecture, biography, geology, home economics, literature, manual training, mythology, nature study, physical geography, products and industries, races of mankind, transportation, and zone life. These slides are ideal to use at any school or church for free entertainment, on the club program, or for classes in the local high school. No rent is charged, but the expressage must be paid by the borrower. This is very little because of the circuit plan of routing.

**TALKING MACHINE RECORDS.** Through the University School of Music, the General Extension Division offers to farmers' clubs, women's societies, churches and schools, sets of the best talking machine records, making up complete programs which are accompanied by lecture material.

**PLAYS AND RECITATIONS.** In order to assist teachers, club women, and dramatic societies in securing good plays with little expense, the General Extension Division will furnish some of the best plays available for amateur use and other information which will help in working up dramatics. A number of plays are usually lent for a short period from which the local committee can make a selection. Copies to be used in producing the play may be ordered from the publishers. Readings and recitations for all occasions will be lent upon request, the only cost to the borrower being postage.

**HIGH SCHOOL DEBATING LEAGUE.** To promote interest in public discussion, and to further the thoughtful consideration of present day problems, the General Extension Division has organized a High School Debating League. The Division makes arrangements for inter-school debates and sends out material to be used in preparing them. The League offers a cup to the team winning the final contest.

**COMMUNITY INSTITUTES.** Community clubs, churches, women's clubs, parent-teachers' associations, fraternal organizations,

labor unions and many other organizations are doing what they can to improve the welfare of their community. These scattered efforts have resulted in much good, but modern business methods demand that all these organizations get together on the certain specialized lines of work most needed until they really make the home town the best town to live in. To secure this unified action, an opportunity must be given to make systematic investigation and carry on profitable discussion, which may result in working out the best solution for some of the local problems.

The General Extension Division offers this opportunity in the community institute. A number of community institutes will be held in the towns of Arkansas during 1920-21. These institutes will consist of a two or three days' program upon which will appear the best known men and women from the State Departments, clubs and associations, from the University, and from other educational institutions. They will consider the local community problems. Lectures and illustrated talks will be given, demonstrations offered, motion pictures shown, and conferences held. In addition to discussing "How to Get More Business", "How to eliminate the city limits and bring the merchant and the farmer together", etc., emphasis will be placed upon some of the often neglected community problems, such as public health, child welfare, recreation, and city beautification. High school pupils and children's meetings will be held at the school, church, library, or other convenient place. Night programs will be designated as "Get together meetings" at which numbers will be given consisting of music, a home talent play or a good picture show, and a short talk.

**EDUCATIONAL INFORMATION AND ASSISTANCE.** The faculty of the College of Education is the largest of any state university in the south, and its services are offered to any community making an effort to improve its system of public schools. These men and women are ready at all times to address county and city teachers' meetings, women's clubs and other organizations on educational topics, to assist in the making of surveys of public school systems, or in giving expert advice in the matter of school buildings, equipment, administration, or supervision. Any school problem whatever which may arise will be carefully considered and capable assistance given through the General Extension Division.

The Bureau of Tests and Measurements is maintained for the purpose of assisting the school systems of Arkansas in the matter of standardizing their work in the various grades. This Bureau is ready to furnish at cost the best tests available for conditions in this state, or in case the tests needed are not in stock, to see that those interested get in touch with the proper

sources of supply. The Bureau will tabulate results, score papers, when necessary, and publish from time to time bulletins showing the comparative standing of those schools cooperating. The results will be interpreted by experts and recommendations made to the principals and superintendents as to possible changes in curriculum, standards of promotion, or treatment of individual cases.

The College of Education publishes regularly a bulletin of abstracts and reviews. This is done for the purpose of selecting from the numerous books which appear each year the most valuable ones for the use of teachers, and to aid the intelligent choice of books for the school room or school library. In the case of the least important books a brief abstract of the contents is given, while the more important ones are reviewed in some detail with comments upon their use.

A Recommendation Bureau is maintained to assist in placing students of the University in teaching positions. This service is free and has proved invaluable in bringing together good situations and suitable teachers.

# COLLEGE OF AGRICULTURE

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The courses in the College of Agriculture are designed to train men for work in agriculture as farmers, farm managers, county agricultural agents, teachers of vocational agriculture, animal husbandmen, horticulturists, managers of farmers' organizations, marketing agents, research and extension specialists, and various other lines of work now open to graduates of colleges of agriculture; and to train women for work in Home Economics as teachers, vocational teachers in Smith-Hughes schools, county home demonstration agents, dieticians, managers of homes, etc.

## ADMISSION

For detailed statement of entrance requirements and description of subjects accepted for entrance, see page 27.

## COURSES OF STUDY

The College of Agriculture offers the following courses:

1. A four-year general course in Agriculture.
  2. A four-year course in Agronomy.
  3. A four-year course in Animal Husbandry.
  4. A four-year course in Dairy Husbandry.
  5. A four-year course in Horticulture.
  6. A four-year course in Plant Pathology.
  7. A four year course in Agricultural Education for teachers in Smith-Hughes Vocational Schools, offered in conjunction with the College of Education.
  8. A four-year course in Agriculture for the training of County Agents and other Extension workers.
- All of the above courses lead to the degree of Bachelor of Science in Agriculture (B. S. A.).
- (In addition to the above courses, special short courses in agriculture are offered).
9. A four-year course in Home Economics.



10. A four-year course in Home Economics for the training of teachers in Smith-Hughes Vocational Schools offered in conjunction with the College of Education.

The above courses lead to the degree of Bachelor of Science in Home Economics (B. S. H. E.). In addition to the courses leading to a degree in Home Economics, special short courses are given for farm women and others.

### REQUIREMENTS FOR DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

The candidate must meet the entrance requirements, residence, and registration requirements and must complete satisfactorily two hundred and ten credit hours as outlined in the following course of study. The first two years are considered as foundation years and are the same for all courses in agriculture. The Junior and Senior years involve more highly specialized work along various lines.

#### FOUR-YEAR COURSE IN AGRICULTURE

##### *Freshman Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 141-142-143 .....	4	4	4
Botany 141-142-143 .....	4	4	4
Chemistry 141-142-143 .....	4	4	4
Plant Propagation (Hort. 141) .....	4	..	..
Farm Crops (Agron. 141) .....	..	4	..
Farm Poultry Culture (A. H. 141) .....	..	..	4
Wood Work (Agr. Eng. 111) .....	1	..	..
Forg. Work (Agr. Eng. 112) .....	..	1	..
Drawing (Agr. Eng. 113) .....	..	..	1
Military Art 111-112-113 .....	1	1	1
	<u>18</u>	<u>18</u>	<u>18</u>

##### *Sophomore Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Chemistry 241-242 .....	4	4	..
Mathematics 257 .....	5	..	..
Physics, 241-242 .....	4	4	..
Agricultural Chemistry 241 .....	..	..	4
Farm Dairying (A. H. 241) .....	..	4	..
Judging Types and Market Classes (A. H. 242) .....	..	..	4

Fruit Growing (Hort. 244) .....	4	..	..
Soils (Agron. 232-233) .....	..	3	3
Comparative Anatomy (Vet. Sci. 231) or Botany....	..	..	4
Farm Machinery (Agr. Eng. 222) .....	..	2	..
Farm Motors (Agr. Eng. 223) .....	..	..	2
Military Art .....	1	1	1
	<hr/> 18	<hr/> 18	<hr/> 18

At the beginning of the Junior year the candidate may choose the general course in agriculture, or major and minor subjects from the Departments of the College, the choice of which will determine largely his course of study for Junior and Senior Years.

Students specializing will choose from courses approved by the candidate's major professor so as to include for the junior and senior years not less than thirty credit hours in the major subject and not less than eighteen credit hours in one minor subject.

### GENERAL COURSE

The following course is prescribed for those who desire a general course in Agriculture:

#### *Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English .....	3	3	3
Feeds and Feeding (A. H. 352) .....	..	5	..
General Bacteriology (Bact. 351) .....	..	..	5
Agricultural Economics (Agr. Econ. 331-332) .....	3	3	..
Farm Crops (Agron. 331-332-333) .....	3	3	3
Harvesting, Refrigeration & Marketing, (Hort. 341) .....	4	..	..
Elective .....	5	4	7
	<hr/> 18	<hr/> 18	<hr/> 18

#### *Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Farm Management (Agr. Econ. 431-432) .....	3	3	..
Economic Entomology (Ent. 242) .....	4	..	..
Plant Pathology (P. P. 331-332) .....	3	3	..
Farm Building (Agr. Eng. 432) .....	..	3	..
Spraying and Spray Material (Hort. 437) .....	..	..	3
Vegetable Gardening (Hort. 347) .....	4	..	..

Live Stock Judging (A. H. 331-332) .....	3	3	..
Electives .....	..	4	12
	<u>17</u>	<u>16</u>	<u>15</u>

*AGRONOMY MAJOR*

The following course is prescribed for those who choose Agronomy as a major:

*Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Farm Crops (Agronomy 331-332-333) .....	3	3	3
Soil Fertility (Agronomy 344-345) .....	4	4	..
Farm Drainage (Agr. Eng. 323) .....	..	..	2
English .....	3	3	3
Economic Entomology (Ent. 242) .....	4	..	..
Agricultural Economics (331-332) .....	3	3	..
General Bacteriology (Bact. 351) .....	..	..	5
Minor (Elective) .....	1	5	5
	<u>18</u>	<u>18</u>	<u>18</u>

*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Farm Management (Agr. Econ. 431-432) .....	3	3	..
Farm Buildings (Agr. Eng. 432) .....	..	3	..
Plant Pathology (Plant Path. 331-332) .....	3	3	..
Electives .....	10	7	16
	<u>16</u>	<u>16</u>	<u>16</u>

*ANIMAL HUSBANDRY MAJOR*

The following course is prescribed for those who choose Animal Husbandry as a major:

*Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English .....	3	3	3
Agricultural Economics (Agr. Econ. 331, 332) .....	3	3	..
Gen. Bacteriology (Bact. 351) .....	..	..	5

Economic Entomology (Ent. 341) .....	4	..	..
History of Breeds and Pedigrees (A. H. 351) .....	5	..	..
Feeds and Feeding (A. H. 352) .....	..	5	..
Animal Breeding (A. H. 353) .....	..	..	5
Live Stock Judging (A. H. 331, 332) .....	..	3	3
Animal Physiology (Vet. Sci. 331) .....	3	..	..
Animal Diseases (Vet. Sci. 332) .....	..	3	..
Electives .....	..	1	2
	18	18	18

*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Farm Management (Agr. Econ. 431, 432) ..	3	3	..
Farm Buildings (Agr. Eng. 432) .....	..	3	..
Live Stock Practicums (A. H. 432) ..	3	..	..
Meat and Its By-Products (A. H. 430) ..	..	3	..
Elective .....	10	7	16
	16	16	16

*DAIRY HUSBANDRY MAJOR*

The following course is prescribed for those who choose Dairy Husbandry as a major:

*Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English .....	3	3	3
Agricultural Economics (Agr. Econ. 331, 332) ..	3	3	..
Gen. Bacteriology (Bact. 351) .....	..	..	5
Economic Entomology (Ent. 341) .....	4	..	..
History of Breeds and Pedigrees (A. H. 351) .....	5	..	..
Feeds and Feeding (A. H. 352) .....	..	5	..
Animal Breeding (A. H. 353) .....	..	..	5
Animal Physiology (Vet. Sci. 331) .....	3	..	..
Animal Diseases (Vet. Sci. 332) .....	..	3	..
Creamery Butter Making and Accounting (A. H. 341) .....	..	4	..
Dairy Stock Judging (A. H. 333) .....	..	..	3
Electives .....	..	..	2
	18	18	18

*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Farm Management (Agr. Econ. 431, 432) .....	3	3	..
Farm Buildings (Agr. Eng. 432) .....	..	3	..
Milk Production (A. H. 437) .....	3	..	..
Agricultural Bacteriology (Bact. 543) .....	..	4	..
Electives .....	10	6	16
	16	16	16

*HORTICULTURE MAJOR*

The following course is prescribed for those who choose Horticulture as a major:

*Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Harvesting, Refrigeration & Marketing (Hort. 341) .....	4	..	..
Orchard Management (Hort. 342) .....	..	4	..
Small Fruits (Hort. 343) .....	..	..	4
English .....	3	3	3
Bacteriology (351) .....	..	..	5
Economic Entomology (Ent. 242) .....	4	..	..
Farm Buildings (Agr. Eng. 432) .....	..	3	..
Agricultural Economics (Agr. Econ. 331-332) .....	3	3	..
Electives .....	4	5	6
	18	18	18

*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Vegetable Gardening (Hort. 347) .....	4	..	..
Market Gardening (Hort. 348) .....	..	4	..
Spraying and Spray Machinery (Hort. 437) .....	..	..	3
Plant Pathology (P. P. 331-332) .....	3	3	5
Farm Management (Agr. Econ. 431-432) .....	3	3	..
Electives .....	6	6	8
	16	16	16

*PLANT PATHOLOGY MAJOR*

The following courses are required of those who choose Plant Pathology as a major:

*Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Botany (Bot. 242) .....	4	..	..
English .....	3	3	3
Botany (Bot. 341) .....	..	4	..
Agricultural Economics (Agr. Econ. 331-332) .....	3	3	..
Plant Pathology (P. P. 131-132) .....	3	3	..
Botany (Bot. 551) .....	..	3	..
Economic Entomology (Ent. 242) .....	4	..	..
Elective .....	1	2	15
	18	18	18

*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Plant Pathology (P. P. 452-453-454) .....	5	5	5
Plant Pathology (P. P. 435-436-437) .....	3	3	3
Horticulture (Hort. 437) .....	..	..	3
Farm Management (Agr. Econ. 431-432) .....	3	3	..
Farm Buildings (Agr. Eng. 432) .....	..	3	..
Electives .....	5	2	5
	16	16	16

## DEPARTMENTAL STATEMENTS

## AGRICULTURAL EDUCATION

The following subjects are required of those who choose Agricultural Education, or Smith-Hughes Teachers' Training Work in Agriculture. The course will be the same as the General Course in Agriculture, with such an adjustment of electives that a student may carry the necessary hours required by the State Board and the College of Education in teachers' training work to enable him to receive teacher's certificate in vocational agriculture.

The following is prescribed for those who desire Special Training Course for County Agents and other Extension Workers. The Junior and Senior years in this course will be the same as the course in General Agriculture with the addition of the following courses:



*Junior Year*

In addition to this General Course, such Electives as may be suggested by the Dean of the College or the Director of Extension Work.

*Senior Year*

Extension Organization and Methods, two hours per week.

Rural Education and Sociology, three hours per week.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN HOME ECONOMICS

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred and ninety-eight credit hours in approved courses as outlined in the following courses of study. The first two years' work is the same for all courses:

*Freshman Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
English 131, 132, 133.....	3	3	3
Chemistry 141, 142, 143 .....	4	4	4
Elementary Sewing (H. E. 131, 132, 133).....	3	3	3
Art 124, 125, 126 .....	2	2	2
Physical Education 111, 112, 113.....	1	1	1
Elective .....	4	4	4
	<hr/> 17	<hr/> 17	<hr/> 17

*Sophomore Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Zoology 241, 242, 243, or Botany 141 .....	4	4	4
Elementary Foods (H. E. 231, 232, 233) .....	3	3	3
Chemistry 241 .....	4	..	..
Elective .....	..	4	..
Chemistry 242 .....	..	..	4
Clothing Economics (H. E. 234, 235, 236) .....	3	3	3
Costume Design (H. E. 221), Textiles H. E. 222,			

223) .....	2	2	2
Physical Education 211, 212, 213 .....	1	1	1
	<u>17</u>	<u>17</u>	<u>17</u>

After the second year the student may choose one of the following courses:

### GENERAL COURSE

#### *Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Food Economics (H. E. 331, 332), Dietetics (H. E. 334) .....	3	3	3
Bacteriology 352 .....	5	..	..
Psychology 140 .....	..	4	..
Modern Language .....	3	3	3
(Chemistry 244, or 247) .....	..	4	..
Elective .....	5	2	10
	<u>16</u>	<u>16</u>	<u>16</u>

#### *Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Dietetics (H. E. 335, 336) .....	3	3	..
Home Making (H. E. 344) .....	..	..	4
House Architecture (H. E. 441), House Furnishing and Decoration (H. E. 442), Social Work in H. E. (H. E. 443) .....	4	4	4
Modern Language .....	3	3	3
Elective .....	6	6	6
	<u>16</u>	<u>16</u>	<u>16</u>

### TEACHERS' COURSE

The Teacher's Certificate, in addition to the degree of Bachelor in Home Economics, is granted to all candidates for a degree who complete the following courses. This course is designed especially for the training of teachers of vocational Home Economics in Smith-Hughes Vocational Schools:

*Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Food Economics (H. E. 331, 332), Dietetics (H. E. 334) .....	3	3	3
Bacteriology 352 .....	5	..	..
Economics 340 .....	4	..	..
Education 250 .....	..	5	..
Education 130 .....	..	3	..
Education 140 .....	..	..	4
Psychology 242 or 140 .....	..	4	..
House Furnishing and Decoration (H. E. 342) ..	..	..	4
Methods of Teaching Home Economics (Edu. 341) ..	..	..	4
*Elective .....	4	1	1
	16	16	16

*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Household Management (H. E. 361) ..	6	..	..
Dietetics (H. E. 335, 336) ..	3	3	..
House Architecture (H. E. 441), House Furnish- ing and Decoration (H. E. 442), Social Work in H. E. (H. E. 443) ..	4	4	4
Education 260, 261 .....	..	6	6
*Elective .....	3	3	6
	16	16	16

\*To be chosen from courses approved by the candidate's major professor.

*HOME DEMONSTRATION COURSE**Junior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Food Economics (H. E. 331, 332) .....	3	3	..
Dietetics (H. E. 334) .....	..	..	3
Bacteriology 352 .....	5	..	..
Psychology 140 .....	..	4	..
Economics 340 .....	4	..	..
Home Nursing and Child Care (H. E. 342) .....	..	..	4
Plant Propagation (Hort. 141) .....	4	..	..
Poultry Husbandry (A. H. 141) .....	..	..	4
*Elective .....	..	9	5
	16	16	16

*Senior Year*

Course	CREDIT HOURS		
	FALL TERM	WINTER TERM	SPRING TERM
Dietetics (H. E. 335, 336) .....	3	3	..
Home Making (H. E. 344) .....	4	..	..
Household Architecture (H. E. 441) .....	4	..	..
House Furnishing (H. E. 442) .....	..	4	..
Social Work in H. E. (H. E. 443) .....	..	..	4
Extension Organization and Methods (Agr. H. E. 521, 522, 523) .....	2	2	2
Vegetable Gardening, (Hort. 347).....	4	..	..
*Elective .....	..	6	10
	17	16	16

\*Note—To be chosen on advice of major professor.

## AGRICULTURAL CHEMISTRY

PROFESSOR READ, MR. -----

Agricultural Chemistry deals mainly with the changes occurring in the soil, the growth and life of plants, the feeding of animals, and the preparation of food products. It is essentially the application of chemistry to agricultural problems.

## COURSES

Title	Credits	Prerequisites
Agricultural Chemistry (Agr. Chem. 241) ..	4	Chem. 143-241
Advanced Agricultural Analysis (Agr. Chem. 341) ..	•	Chem 241
Chemistry of Nutrition (Agr. Chem. 335).....	3	Chem. 242

\*See Statement.

241. AGRICULTURAL CHEMISTRY. The principles of gravimetric and volumetric analysis. Lectures, demonstrations, and assigned readings. Laboratory work embraces the quantitative analysis of fertilizers, plant materials, soils, etc. Three recitations and one laboratory period per week.

PROFESSOR READ.

341. ADVANCED AGRICULTURAL ANALYSIS. Chemical analysis of feeds, fertilizers, insecticides, fungicides, dairy products, soils, and foods. Laboratory work supplemented by lectures, the amount of credit to be determined by the work done.

PROFESSOR READ,

MR. -----

355. **CHEMISTRY OF NUTRITION.** Designed to give the student a thorough grounding in the chemistry of foods and the physiology of nutrition with special attention to the biological analysis of diets based upon recent theories and investigations. This course should precede the course in feeds and feeding (Animal Husbandry, 352), and should also be taken in connection with dietetics by those in the Department of Home Economics. Lectures and recitations three hours a week.

PROFESSOR READ.

## AGRICULTURAL ECONOMICS

PROFESSOR -----

This department offers courses in Agricultural Economics, agricultural organization, farm management and marketing. The object is to acquaint the student thoroughly with the business side of Agriculture, especially the organization of the farm as a business unit and its relationship to other farms, and the business organization of agriculture both in production and marketing. It takes up questions of leases, tenantry, and other economic problems. Each subject matter course in other departments in the College of Agriculture teaches the ordinary processes of marketing each product. The Department of Agricultural Economics teaches only those subjects in marketing which are general in application. This department takes up business practice, accounting, management of farmers' organizations, etc.

Courses	No	Credits
General Principles of Agricultural Cooperation .... (Agr. Econ. 331)		3
Cooperative Organizations ..... (Agr. Econ. 332).....		3
Accounting and Management of Cooperative Enterprises ..... (Agr. Econ. 333).....		3
Marketing ..... (Agr. Econ. 421).....		2
Farm Management ..... (Agr. Econ. 431-432)		6
Farm Management ..... (Agr. Econ. 433).....		3
Extension Organization and Methods..... (Agr. Econ. 521).....		2

331. **GENERAL PRINCIPLES OF AGRICULTURAL COOPERATION.** This course deals with cooperative organizations, principles on which they are perfected and the methods of conducting the business of such organizations. Lectures and recitations three hours per week.

PROFESSOR -----

332. **COOPERATIVE ORGANIZATIONS.** Cooperative principles applied to well-known agricultural activities such as cooperative elevators, creameries, warehouses, stock shipping associations, marketing associations, etc. Lectures and recitations three hours per week.

PROFESSOR -----

335. ACCOUNTING AND MANAGEMENT OF COOPERATIVE ENTERPRISES. Systems of accounting and business methods and management of cooperative organizations. Lectures and recitations three hours per week.

PROFESSOR --- -----

421. MARKETING. (Elective). General principles of marketing, classing, standardization, accounting, and practices in marketing farm produce. This course is intended to correlate the marketing work taken up by the subject matter division in production courses. Lectures and recitations two hours per week.

PROFESSOR -- -----

431-432. FARM MANAGEMENT. General principles of farm management; choice of the farm, types of farming; farming as a business; administration; cost of production; records and accounts. Lectures and recitations three hours per week.

PROFESSOR -----

433. FARM MANAGEMENT (Elective). Advanced course in farm management, farm accounting, relationship of landlord and tenant, etc. Lectures and recitations three hours per week.

PROFESSOR -----

521. EXTENSION ORGANIZATION AND METHODS. This course gives the history of extension work, its origin and development; general principles involved; method of organization in state and county; how to conduct demonstrations with farmers; how to ascertain agricultural problems and plan work on a community, county and state-wide basis; methods of approach, etc. Lectures and recitations two hours per week.

DEAN KNAPP.

## AGRICULTURAL ENGINEERING

(Under the Joint Supervision of the Dean of the College of Agriculture and the Dean of the College of Engineering.)

This department offers courses in drainage construction of farm buildings and other structures, wood work, iron work, drawing of plans, modern farm machinery, farm motors and other power equipment. The object is to train the student in the knowledge and use of modern farm machinery and equipment, its adjustment and uses, and in the construction of proper buildings and in other engineering problems of modern farming.



## COURSES

Title	No.	Credits
Wood Work .....	(Agr. Eng. 111) .....	1
Forge Work .....	(Agr. Eng. 112) .....	1
Drawing .....	(Agr. Eng. 113) .....	1
Farm Machinery .....	(Agr. Eng. 222) .....	2
Farm Motors .....	(Agr. Eng. 223) .....	2
Farm Drainage .....	(Agr. Eng. 323) .....	2
Farm Buildings .....	(Agr. Eng. 432) .....	3

111 WOOD WORK.—Carpentry, relating especially to construction of devices used on farms.

PROFESSOR .....

112 FORGE WORK.—Handling of iron and blacksmithing, especially applicable to ordinary farm practices.

PROFESSOR .....

113. DRAWING.—Designed for the purpose of familiarizing students with the principles of drawing and drafting in order to perfect them in making plans for building, drawing outlines of farms, etc.

PROFESSOR .....

222 FARM MACHINERY.—Designed for the purpose of familiarizing students with the design, uses, adjustment and handling of types of modern farm implements and tools, such as riding plows, disk harrows, seeders, manure spreaders, mowers, harvesters, and other implements used in the tillage of soil and production of crops.

PROFESSOR .....

223 FARM MOTORS.—The general principles of gas engines, tractors, trucks, and other power equipment on the farm.

PROFESSOR .....

323. FARM DRAINAGE.—The principles of ordinary drainage of lands, including ditching, tiling, terracing, etc.; prevention of erosion, and effect of drainage on soils.

PROFESSOR .....

432 FARM BUILDINGS.—The planning and construction of farm buildings and other structures, their arrangement, convenience, sanitation, etc.

PROFESSOR .....

## AGRONOMY

PROFESSOR NELSON, ASSISTANT PROFESSOR SACHS, ASSISTANT  
PROFESSOR OSBORN, ASSISTANT PROFESSOR HODSON, MR. AUSTIN

The courses in this department are designed to meet the requirements of: (1) students who desire a knowledge of the subject as a part of a general education, (2) students who are interested especially in farm operations, or the management of land, (3) students who desire a technical knowledge of the subject as a preparation for teaching, or graduate or research work.

## COURSES

Title	No.	Credits	Prerequisites
Agronomy .....	(Agron. 142)	4	None
Cotton Classing .....	(Agron. 212)	1	Freshman Year
Soils .....	(Agron. 232)	3	142, Chem. 143
Soils .....	(Agron. 233)	3	142, Chem. 143
Farm Crops .....	(Agron. 331)	3	142, 232, 233
Farm Crops .....	(Agron. 332)	3	142, 232, 233
Farm Crops .....	(Agron. 333)	3	142, 232, 233
Soil Fertility .....	(Agron. 344)	4	232, 233
Soil Fertility .....	(Agron. 345)	4	232, 233
Soil Classification .....	(Agron. 336)	3	232, 233
Cotton Production .....	(Agron. 431)	3	142, 232, 233
Cotton Handling .....	(Agron. 432)	3	142, 232, 233
Plant Breeding .....	(Agron. 433)	3	Botany 341
Research Crops or Soils .....	(Agron. 421)	1-2	*
Research Crops or Soils .....	(Agron. 422)	1-2	*
Research Crops or Soils .....	(Agron. 423)	1-2	*

\*See statement of course.

142. AGRONOMY.—Crops—cotton, corn, small grains, clovers, grasses, forage, and miscellaneous crops including varieties, strains, quality, the use of score cards; identification of seed grasses, clovers, alfalfa, other legumes and forage crops; weed seed, characteristic adulterants. Stress is placed upon the staple crops. Lectures and recitations two hours, laboratory practice four hours a week.

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ASSISTANT PROFESSOR HODSON,  
MR. AUSTIN.

212. COTTON CLASSING.—The relative value of cotton grades and the factors that determine them, with practical exercises in classing and stapling. Open to any student in the University in the Sophomore, Junior, or Senior classes. Students taking Agronomy 431-2 will not take this course.

ASSISTANT PROFESSOR HODSON.

232, 233. SOILS.—The origin, formation, physical properties and classifications of soils; soil moisture, its movements and

methods of control, drainage, tillage, checking erosion; relation of different physical properties of soil to moisture holding capacity, temperature and aeration, with special reference to soil management. Lectures, recitations, and laboratory three hours per week.

ASSISTANT PROFESSOR SACHS.

MR. AUSTIN.

331. FARM CROPS.—A thorough study of corn, including germination tests, planting, cultivation, harvesting, storing, corn improvement, fertilization, rotation; a study of station work, study of varieties, commercial grading, and marketing.

PROFESSOR NELSON,

ASSISTANT PROFESSOR HODSON.

332. FARM CROPS.—The small grains, including a study of varieties, adaptation, culture; rotation and rotation practices; crop improvement; a study of station work; commercial grading, and marketing.

PROFESSOR NELSON,

MR. AUSTIN.

333. FORAGE CROPS.—Forage crops including grasses, clovers, alfalfa, annual legumes and other forage crops; adaptation, utilization, culture, possibilities and methods of improvement; purity and germination tests study of weeds and weed control.

PROFESSOR NELSON,

MR. AUSTIN.

344, 345. SOIL FERTILITY.—Crop requirements; nature and source of plant foods; exhaustion of soils, maintenance and increase of fertility; green manures, farm manures and commercial fertilizers; biological life of soils, with special attention to the nitrogen problem and liberation of mineral plant foods; rotations and effect of different systems of farming on productivity of the soil, based on a study of the older field experiments. Lectures, recitations and laboratory four hours per week.

ASSISTANT PROFESSOR SACHS.

331. SOIL CLASSIFICATION.—Designed to familiarize the student with the methods and practice of soil survey work. The important soil types will be studied with special reference to Arkansas and the South in general. Lectures and field practice three hours a week.

ASSISTANT PROFESSOR SACHS.

431. COTTON PRODUCTION.—An advanced course in the production of cotton. The following topics will be studied in detail: origin, history, production, composition, and cropping systems. The practical work will consist of a study of the form and structure of the cotton plant and fibre, identification of variety groups, and variety studies in the field. Lectures and laboratory three hours per week.

ASSISTANT PROFESSOR HODSON.

432. COTTON HANDLING.—Continuation of Agron. 431. Cotton improvement by selection and breeding, harvesting, storing, and marketing. The laboratory work will consist of "cotton classing" and "stapling." The government standards will be used for comparison in classing. Lectures and laboratory three hours per week.

ASSISTANT PROFESSOR HODSON.

433. PLANT BREEDING.—The practical application of the principles of variation and heredity to the breeding of general farm crops. Special attention is paid to the practical breeding of corn, cotton, small grains, and forage crops. Lectures and recitations four hours a week. Open only to seniors.

ASSISTANT PROFESSOR HODSON.

421, 422, 423. RESEARCH—Research work in special problems designed for advanced students and those preparing a thesis. One to two hours a week.

PROFESSOR NELSON,

ASSISTANT PROFESSOR SACHS.

## ANIMAL HUSBANDRY

PROFESSOR DVORACHEK, ASSISTANT PROFESSOR MASON, ASSISTANT PROFESSOR STOUT, MR. HUNT

This department offers courses in livestock production, poultry production, and dairying. Training is given in the selection, breeding, feeding, development, care, management, and marketing of the various classes and breeds of farm animals. The stock and poultry owned by the department are used to familiarize the student with the various types and breeds of live stock. Students interested in Dairying have an opportunity to study the machinery in operation in a commercial creamery.

## COURSES

Title	No.	Credits	Prerequisites
Farm Poultry Culture .....	(A. H. 141)	4	None.
Farm Dairying .....	(A. H. 241)	4	Chem. 143
Judging Types and Market Classes .....	(A. H. 242)	4	None
History of Breeds and Pedigrees .....	(A. H. 351)	5	A. H. 242
Feeds and Feeding .....	(A. H. 352)	5	Agr. Chem. 241
Animal Breeding .....	(A. H. 353)	5	Vet. Sci. 241, 331
Judging Breed Types of Sheep and Swine .....	(A. H. 331)	3	A. H. 242, 351
Judging Breed Types of Beef Cattle and Horses .....	(A. H. 332)	3	A. H. 242, 351
Dairy Stock Judging .....	(A. H. 333)	3	A. H. 242, 351
Creamery Butter Making and Accounting .....	(A. H. 341)	4	A. H. 241
Meat and Its By-Products .....	(A. H. 430)	3	"
Advanced Live Stock Judging .....	(A. H. 431)	3	A. H. 242, 351, 331
Live Stock Practicums .....	(A. H. 432)	3	A. H. 351, 352, 353
Pork Production .....	(A. H. 433)	3	A. H. 351, 352, 353
Horse Production .....	(A. H. 434)	3	A. H. 351, 352, 353
Poultry Production .....	(A. H. 435)	3	A. H. 141
Beef Production .....	(A. H. 436)	3	A. H. 351, 352, 353
Milk Production .....	(A. H. 437)	3	A. H. 351, 352, 353
Mutton and Wool Production .....	(A. H. 438)	3	A. H. 351, 352, 353
Ice Cream and Cheese Making .....	(A. H. 439)	3	A. H. 241, 341
Market Milk and Dairy Inspection .....	(A. H. 421)	2	A. H. 241, 437; Bact. 351
Animal Husbandry or Dairy Research .....	(A. H. 422)	2	"
Animal Husbandry or Dairy Research .....	(A. H. 423)	2	"
Animal Husbandry or Dairy Research .....	(A. H. 424)	2	"

\*See Statement.

141. FARM POULTRY CULTURE.—The principles of the following subjects will be studied in the order given: Breeds, housing, feeding, breeding, incubation, and brooding, poultry products, diseases, and management, including methods of marketing. The course will consist of lectures and recitations three hours, laboratory practice three hours a week.

## ASSISTANT PROFESSOR STOUT.

241. FARM DAIRYING.—The composition of milk, causes of variation in composition, abnormal milk and its causes, bacteria in milk products, the lactometer, milk adulteration, Babcock testing, milk separation, farm butter making, handling milk products on the farm, and marketing milk and milk products. Lectures and recitations one hour, laboratory practice six hours a week.

## ASSISTANT PROFESSOR MASON.

242. JUDGING TYPES AND MARKET CLASSES.—Practice in scoring types and market classes of sheep, swine, cattle and horses, using the score card, followed by comparative judging. Emphasis

is given to the subjects of standardization, grading, etc., in marketing live stock. Lectures and recitations one hour, laboratory practice nine hours a week.

PROFESSOR DVORACHEK,  
MR. HUNT.

351. HISTORY OF BREEDS AND PEDIGREES.—The origin, history, and development, breed characteristics and adaptation of the more important breeds of sheep, swine, cattle, and horses; a study of the pedigrees of prominent individuals of the various breeds. Lectures and recitations five hours a week.

MR. HUNT.

352. FEEDS AND FEEDING.—The principles of animal nutrition; digestibility of feeds; composition, value and preparation of feeds; construction and use of silos; selection of feeds for balanced rations; and the economical feeding of all classes of farm animals. Lectures and recitations five hours a week.

PROFESSOR DVORACHEK.

353. ANIMAL BREEDING.—The principles of animal breeding; the various systems of animal breeding; and the application of the principles of genetics to practical animal breeding. Lectures and recitations five hours a week.

MR. HUNT.

331. JUDGING BREED TYPES OF SHEEP AND SWINE.—Scoring and comparative judging of breed types of sheep and swine. Breed characteristics are given special attention. Animals from the college herds, supplemented by livestock owned by neighboring breeders, are used for class work. Laboratory practice nine hours a week.

MR. HUNT.

332. JUDGING BREED TYPES OF BEEF CATTLE AND HORSES.—Scoring and comparative judging of breed types of beef cattle and horses. Breed characteristics are given special attention. Animals from the college herds, supplemented by livestock owned by neighboring breeders, are used for class work. Laboratory practice nine hours a week.

PROFESSOR DVORACHEK.

333. DAIRY STOCK JUDGING.—Show yard judging of dairy cattle; classification of animals in the show ring; comparative judging of breed types of dairy cattle. This work is designed to select and train a judging team for the National Dairy Show. Laboratory practice nine hours a week.

PROFESSOR DVORACHEK.



341. CREAMERY BUTTER MAKING AND ACCOUNTING.—The principles of creamery butter making; the construction and care of creameries and their equipment; methods of sampling and grading cream; pasteurizing; starter making; cream ripening; creamery accounting; creamery management and marketing of product. Lectures and recitations two hours, laboratory practice six hours a week.

ASSISTANT PROFESSOR MASON.

430. MEAT AND ITS BY-PRODUCTS.—The slaughtering and dressing of meat animals, meat cutting, and curing and the utilization of meat by-products. Lecture and recitation three hours a week, supplemented by demonstrations. Elective only to junior and senior students.

PROFESSOR DVORACHEK.

431. ADVANCED LIVE STOCK JUDGING.—Show yard judging of breed types and market classes of sheep, swine, beef cattle, dairy cattle and horses. This course is designed to select and train judging teams for live stock judging contests. Laboratory practice nine hours a week.

PROFESSOR DVORACHEK,  
MR. HUNT.

432. LIVE STOCK PRACTICUMS.—Practice in the feeding, care, and management of live stock. This course is designed to train students in the handling of live stock on the farm and in the show ring. Laboratory practice nine hours a week.

MR. HUNT,  
HERDSMAN.

433. PORK PRODUCTION.—An advanced course in pork production and marketing both from the standpoint of the general and the special breeder. Problems in management are assigned. Lectures and recitations three hours a week, supplemented by collateral reading of experimental data.

MR. HUNT.

434. HORSE PRODUCTION.—An advanced course in horse production and marketing, both from the standpoint of the general and the special breeder. Problems in management are assigned. Lectures and recitations three hours a week, supplemented by collateral reading of experimental data.

PROFESSOR DVORACHEK.

435. POULTRY PRODUCTION.—An advanced course in poultry production and marketing, including practical experience in the poultry plant. Lectures and recitations two hours, laboratory practice three hours a week.

ASSISTANT PROFESSOR STOUT.

436. **BEEF PRODUCTION.**—An advanced course in beef production and marketing, both from the standpoint of the general and the special breeder. Problems in management are assigned. Lectures and recitations three hours a week, supplemented by collateral reading of experimental data.

PROFESSOR DVORACHEK.

437. **MILK PRODUCTION.**—Dairy farm management and the marketing of dairy farm products, both from the standpoint of the general and the special dairymen. Problems in management are assigned. Lectures and recitations three hours a week, supplemented by collateral reading of experimental data.

PROFESSOR DVORACHEK.

438. **MUTTON AND WOOL PRODUCTION.**—An advanced course in mutton and wool production and marketing, both from the standpoint of the farmer and the range sheepman. Problems in management will be assigned. Lectures and recitations three hours a week, supplemented by collateral reading of experimental data.

MR. HUNT.

439. **ICE CREAM AND CHEESE MAKING.**—Ice cream and ices, and preparation of materials used in their manufacture, for home use and for sale. A study of various kinds of cheese, Cheddar Cheese making and curing for home use and for sale. The commercial manufacture of Cheddar Cheese and ice cream for retail and wholesale trade. Lectures and recitation one hour, laboratory practice six hours a week.

ASSISTANT PROFESSOR MASON.

421. **MARKET MILK AND DAIRY INSPECTION.**—Different classes of market milk, transportation, storage, marketing and accounting. Practice is given in the use of score cards for inspecting milk plants, dairy farms, and creameries. Lectures and recitations one hour, laboratory practice three hours per week.

ASSISTANT PROFESSOR MASON.

422, 423, 424. **ANIMAL HUSBANDRY OR DAIRY RESEARCH.**—Senior students majoring in Animal Husbandry or Dairying may, with the consent of their major professor, elect this course. Special problems will be assigned. Not more than two credits a term will be allowed for this work.

PROFESSOR DVORACHEK.

## BACTERIOLOGY AND PATHOLOGY.

## COURSES

Title	No.	Credits	Prerequisites
General Bacteriology	(Bact. 351)	5	Chem. 242; Biol. 141, 142
Household Bacteriology .....	(Bact. 352)	5	Chem. 242; Biol. 141, 142
Agricultural Bacteriology	(Bact. 543)	4	Bact. 351, 352
Pathogenic Microbiology .....	(Bact. 544)	4	Bact. 351, 352

351. GENERAL BACTERIOLOGY.—Elementary bacteriology so designed as to give the student an understanding of the morphology, classification, and physiological activities of bacteria. Thorough training in laboratory methods. Recitation three hours, and laboratory six hours a week.

PROFESSOR BLEECKER.

352. HOUSEHOLD BACTERIOLOGY.—Introductory study of the morphology, classification, and physiological activities of bacteria, yeasts, and molds; will be followed by a study of sanitation and the relation of these micro-organisms to the home. Recitation three hours, and laboratory six hours a week.

PROFESSOR BLEECKER.

543. AGRICULTURAL BACTERIOLOGY.—The bacteria of the soil and water, including the different nitrifying bacteria, and those in milk and milk products. Recitation two hours, and laboratory four hours a week.

PROFESSOR BLEECKER.

544. PATHOGENIC MICROBIOLOGY.—The disease producing micro-organisms, the diseases they produce, their dissemination and control. Recitation two hours, and laboratory four hours a week.

PROFESSOR BLEECKER.

## ENTOMOLOGY

PROFESSOR BAERG

The courses offered in entomology are intended to give the student an understanding of the general principles underlying insect life, of the life economy of the more beneficial as well as the more injurious species, and of the fundamental facts governing the control of insect pests.

Courses	No.	Credit	Prerequisites
General Entomology .....	(Ent. 151)	5	None
Economic Entomology .....	(Ent. 242)	4	None
Morphology of Insects .....	(Ent. 233)	3	*
Elementary Systematic Entomology ..	(Ent. 234)	3	151 or 233
Advanced Economic Entomology .....	(Ent. 335)	3	151, 242
Household Entomology .....	(Ent. 326)	2	151

\*See Statement.

151. **GENERAL ENTOMOLOGY.** Introductory study of the morphology, life history, and classification of insects and their near relatives. Lectures three hours a week, laboratory practice four hours a week.

PROFESSOR BAERG.

242. **ECONOMIC ENTOMOLOGY.** This course will begin with a brief introduction to the study of insects as a class; it will include all the common pests of farm, garden, and orchard, as well as the common insect parasites of domestic animals. Lectures three hours a week, laboratory practice three hours a week.

PROFESSOR BAERG.

233. **MORPHOLOGY OF INSECTS.** This course takes up in greater detail the laboratory work of General Entomology. It must be preceded or accompanied by Course 151. Laboratory practice six hours a week.

PROFESSOR BAERG.

234. **ELEMENTARY SYSTEMATIC ENTOMOLOGY.** A laboratory study of the wing venation of insects and of the important distinguishing characteristics used in classifying insects. Laboratory practice six hours a week.

PROFESSOR BAERG.

335. **ADVANCED ECONOMIC ENTOMOLOGY.** The methods of investigation, and the control of economic insects. Lectures one hour a week, laboratory practice, assigned reading, and report writing four hours a week.

PROFESSOR BAERG.

326. **HOUSEHOLD ENTOMOLOGY.** The life history, habits, and control of insects injurious to the household. Lectures and recitations two hours a week.

PROFESSOR BAERG.

## HOME ECONOMICS

PROFESSOR PALMER, MISS DYCHE, MISS HILL, MISS COWAN

## COURSES

Title	No.	Credits	Prerequisites
Elementary Sewing .....	(H. E. 131, 132, 133)	9	None
Elementary Foods .....	(H. E. 231, 232, 233)	9	Chem. 141-2-3
Clothing Economics .....	(H. E. 234, 235, 236)	9	131-2-3
Costume Design .....	(H. E. 221)	2	131-2-3, Art 124-5-6
Textiles .....	(H. E. 222, 223)	4	131-2-3
Food Economics .....	(H. E. 331, 332)	6	231-2-3
Dietetics .....	(H. E. 334, 335, 336)	9	331-2, Biol 241-2
Home Nursing and Child Care .....	(H. E. 342)	4	None
House Architecture .....	(H. E. 441)	4	Art 124-5-6
House Furnishing and Decora- tion .....	(H. E. 442)	4	131-2-3, 441
Social Work in Home Econ- omics .....	(H. E. 443)	4	131-213, 231-2-3
Home Making .....	(H. E. 344)	4	331-2
Household Management .....	(H. E. 361)	6	331-2, 131-2-3
Special Problems .....	(H. E. *511 to 541)	1-4	See Statement
Millinery .....	(H. E. 521)	2	131-2-3
Art Needlework .....	(H. E. 523)	2	234-5-6
Elementary Cooking .....	(H. E. 121, 122, 123)	6	None
Advanced Costume Design.....	(H. E. 522)	2	221
Arts and Crafts .....	(H. E. 524, 525, 526)	6	Art 124, 125, 126
Advanced House Furnishing and Decoration .....	(H. E. 444)	4	443

131, 132, 133. **ELEMENTARY SEWING.** Designed to give ease in using and caring for sewing machines, in taking accurate measurements, and in adapting commercial patterns. Includes the comparison and selection of materials for their appropriateness, as well as for their economic value. Lectures and laboratory six hours a week.

MISS HILL AND MISS COWAN.

231, 232, 233. **ELEMENTARY FOODS.** The principles involved in the preparation of foods, with special attention to selection and manufacture. Lectures and recitations two hours, laboratory four hours a week.

MISS DYCHE.

234, 235, 236. **CLOTHING ECONOMICS.** The technique and principles of costume designing and their practical application in the design and construction of garments; the use by each student of patterns drafted by herself to her own measurements. Lectures and laboratory six hours a week.

MISS HILL.

231. **COSTUME DESIGN.** The principles of design and color harmony applied to costume. A short review of the history of costume. Lecture and laboratory two hours a week.

MISS HILL.

222,223. **TEXTILES.** The source of supply, structure, manufacture, and relative value of fabrics. Laboratory practice in weaving, in the identification of fibers, and the analysis of fabrics from the standpoint of composition and weave structure. Lecture one hour, laboratory two hours a week.

MISS COWAN.

331,332. **FOOD ECONOMICS.** Economic problems of the food supply; cost and nutritive value of typical foods; the study of dietetics; preparation and service of meals. Lectures and recitations two hours, laboratory four hours a week.

MISS DYCHE.

334, 335, 336. **DIETETICS.** The fundamental principles of human nutrition as applied to the feeding of individuals under normal conditions and under pathological conditions chiefly depending upon diet. Lectures and recitations two hours, laboratory two hours a week.

MISS DYCHE.

342. **HOME NURSING AND CHILD CARE.** Elementary principles in the care of the sick, care and arrangement of the bedroom, food for the convalescent, and first aid. Lecture three hours and laboratory two hours a week.

PROFESSOR PALMER.

441. **HOUSE ARCHITECTURE.** Detailed study of the situation, surrounding, and construction of the house. Complete skeleton plans are made. Lectures and laboratory four hours a week.

PROFESSOR GIVENS.

442. **HOUSE FURNISHING AND DECORATING.** The principles of design and color applied to interior decoration; problems in the cost and selection of floor and wall finishes, hangings, and furniture. Lecture two hours and laboratory four hours a week.

MISS HILL.

443. **SOCIAL WORK AND HOME ECONOMICS.** A survey of the fundamental laws of heredity and environment; the relation of social conditions to morality, factors influencing the conservation of human life. Topics assigned. Open to seniors and juniors. Lectures and recitations four hours a week.

MISS COWAN.



344. **HOME MAKING.** The home as a social unit; ancient and modern customs and laws governing the home. Individual topics assigned. Open to juniors and seniors. Lecture one hour, laboratory six hours a week.\*

MISS DYCHE.

361. **HOUSEHOLD MANAGEMENT.** The social, economic and practical problems of home management. The laboratory work consists of experience in performing actual household operations, including budget making, accounting and marketing. Topics assigned. Lectures three hours and laboratory six hours a week.\*

PROFESSOR PALMER.

511. **SPECIAL PROBLEMS.** A senior may elect some special problem in her major subject for special research. The course will require special conferences with the instructor. Open to seniors and graduate students.

PROFESSOR PALMER.

521. **MILLINERY.** The designing and drafting of patterns for different types of hats, including the principles underlying their construction and trimming. A model of each type is made by each student. Lectures and laboratory four hours a week.

MISS HILL.

523. **ART NEEDLEWORK.** Instruction and practice in the various types of art needlework and the application of these types. Lectures and laboratory four hours a week.

MISS HILL.

123, 124, 125. **ELEMENTARY COOKING.** The typical foods and their preparation with special reference to their nutritive value. Lecture one hour, laboratory three hours a week.

MISS DYCHE.

522. **ADVANCED COSTUME DESIGN.** A continuation of course 221. Original designs made.

524, 525, 526. **ARTS AND CRAFTS.**

444. **INTERIOR DECORATION.** An advanced course continuing from 442.

Home projects during summer vacation will be planned in all courses where necessary to meet individual needs.

\*Note—Students will have to bear expense of course, whatever it may be. In case of Home Economics 344 and 361 it will be living expense in the Home Management House.

## HORTICULTURE

PROFESSOR COOPER, ASSISTANT PROFESSOR WOOLSEY

The courses offered in this department are designed to give the student a thorough knowledge of the principles and practices of the different phases of horticulture. The work is so arranged that it will meet the needs of students interested along practical lines, or of students who desire a technical knowledge of the subject as a preparation for college teaching or research work.

Students who have had the necessary fundamental training in related subjects, and who desire to fit themselves for teachers or investigators, may receive employment during a part of their time in the laboratory and fields.

Name of Course	No.	Credits	Prerequisites
Plant Propagation .....	(Hort. 141)	4	
Floriculture .....	(Hort. 237)	3	
Landscape Gardening .....	(Hort. 238)	3	
Principles of Fruit Growing.....	(Hort. 244)	4	Hort. 141
Harvesting, Refrigeration and Marketing .....	(Hort. 341)	4	Hort. 141, 244
Orchard Management .....	(Hort. 342)	4	Hort. 141, 244
Small Fruits .....	(Hort. 343)	4	Hort. 141, 244
Vegetable Gardening .....	(Hort. 347)	4	Hort. 141
Market Gardening .....	(Hort. 348)	4	Hort. 141, 347
Potato Production .....	(Hort. 339)	3	Hort. 141, 347
Systematic Pomology .....	(Hort. 435)	3	Hort. 341, 343
Evolution of Cultivated Plants and Plant Breeding .....	(Hort. 436)	3	Juniors and Seniors
Spraying and Spray Materials .....	(Hort. 437)	3	Juniors and Seniors
Prepared Products .....	(Hort. 451)	3	Juniors and Seniors
Experimental Horticulture .....	(Hort. 541)	1-4	
Experimental Horticulture .....	(Hort. 542)	1-4	
Experimental Horticulture .....	(Hort. 543)	1-4	

141. PLANT PROPAGATION. The methods employed in reproducing and multiplying plants, seedage, graftage, construction and management of hotbeds and cold frames, and general nursery and garden practices. Two hours lecture. Four hours laboratory.

ASSISTANT PROFESSOR WOOLSEY.

237. FLORICULTURE. Propagation, cultivation, and management of decorative and flowering plants for the house, conservatory, greenhouse and garden. Two hours lecture. Two hours laboratory.

ASSISTANT PROFESSOR WOOLSEY.

238. **LANDSCAPE GARDENING.** Planting materials and their arrangement in landscape gardening, with reference to farm and city homes and school grounds. Two hours preparation. Two hours lecture. Two hours laboratory.

ASSISTANT PROFESSOR WOOLSEY.

244. **PRINCIPLES OF FRUIT GROWING.** The general principles involved in planning, planting and operating home and commercial orchards. Each phase of orcharding and fruit growing will be taken up and all problems confronting the practical orchardist will receive attention. Actual practice will be given in pruning, mixing, and applying sprays, and in harvesting, packing and storing fruit. Two hours lecture. Four hours laboratory.

PROFESSOR COOPER.

341. **HARVESTING, REFRIGERATION AND MARKETING.** The general principles involved in harvesting, grading, packing, storing, shipping, and marketing fruits. The student is expected to become acquainted with methods of handling different kinds of fruit and proficient in all of the operations concerned. Different orchards and packing houses will be visited. Storage, refrigeration and transportation will receive special attention. Storage houses and loading stations will be visited and construction operation and methods studied. Two hours lecture. Four hours laboratory.

PROFESSOR COOPER,

ASSISTANT PROFESSOR WOOLSEY.

342. **ORCHARD MANAGEMENT.** The cultural methods best adapted to different kinds of fruit, including types of soils, air and water drainage, soil fertility, fertilizers, cover and companion crops, and the theory and practice of pruning. Two hours lecture. Four hours laboratory.

PROFESSOR COOPER,

ASSISTANT PROFESSOR WOOLSEY.

343. **SMALL FRUITS.** Grapes, cane fruits and strawberries. Work will be conducted in such a manner that the student will have thorough knowledge of how such fruits should be handled to obtain the best results from the standpoint of the home fruit garden or commercial plantings. Two hours lecture. Four hours laboratory.

PROFESSOR COOPER,

ASSISTANT PROFESSOR WOOLSEY.

347. **VEGETABLE GARDENING.** The general and fundamental principles of vegetable growing and of the practical problems in handling the various vegetable crops. Each of the prin-

cial vegetable crops will be taken up from the standpoint of planting, cultural methods, soils and fertilizers, insect and disease control, harvesting and storing. Two hours lecture. Four hours laboratory.

ASSISTANT PROFESSOR WOOLSEY.

348. MARKET GARDENING. The methods of growing and handling various vegetables such as cabbage, onions, canteoupes, melons, etc., on a large scale by intensive methods. Fertilizers, special cultural methods, harvesting, storage, refrigeration and marketing, and the control of common insect and disease pests will be stressed. Two hours lecture. Four hours laboratory.

ASSISTANT PROFESSOR WOOLSEY.

349. POTATO PRODUCTION. Devoted exclusively to studying the production and handling of Irish and sweet potatoes under field conditions. Two hours lecture. Two hours laboratory.

ASSISTANT PROFESSOR WOOLSEY.

435. SYSTEMATIC POMOLGY. The systematic classification, nomenclature, history, origin, and adaptability of each of the various fruits with practical work in judging. Two hours lecture. Two hours laboratory.

PROFESSOR COOPER.

436. EVOLUTION OF CULTIVATED PLANTS AND PLANT BREEDING. Organic evolution as applied to the modification of plants, particularly of cultivated fruits and vegetables, together with the history of the plants and a study of their environment and original habits. Two hours lecture. Two hours laboratory Juniors and Seniors.

PROFESSOR COOPER.

451. PREPARED PRODUCTS. The manufacture, sale, and use of different products from horticultural crops including cider and vinegar making, dessication and evaporation, canning and preserving, and the manufacture of by products. One hour lecture. Four hours laboratory.

PROFESSOR COOPER,

ASSISTANT PROFESSOR WOOLSEY.

541, 542, 543. EXPERIMENTAL HORTICULTURE. Assigned problems in horticulture. Research work in the laboratory or fields, with practice in compiling data and drawing conclusions. Hours for consultation.

PROFESSOR COOPER.

## PLANT PATHOLOGY

PROFESSOR ELLIOTT, ASSISTANT PROFESSOR ROSEN

The courses in Plant Pathology are designed to give the student a knowledge of the origin, causes, and methods of control of plant diseases both for practical use and as a preparation for special research work in plant pathology. The advanced courses may be elected by students choosing Plant Pathology or Botany as a major.

## COURSES

Title	No.	Credits	Prerequisites
Plant Pathology .....	(P. P. 331-332)	3	Botany 141-2-3
Morphology of Fungi .....	(P. P. 452)	5	Botany 141-2-3
Systematic Mycology .....	(P. P. 453)	5	Botany 141-2-3
Diseases of Forest Trees .....	(P. P. 454)	5	331-332
Plant Pathology Methods .....	(P. P. 435-436-437)	3	331-2, Bact. 351
Pathological Plant Anatomy .....	(P. P. 536-537-538)	3-5	331-2, 452-3
Plant Pathology Research .....	(P. P. 521-522-523)	1-2	435-6-7

**331-2. PLANT PATHOLOGY.** Diseases of plants in relation to parasites and environment; conditions inducing disease, and the reaction of diseased organisms, and the methods of disease control. Lectures and recitations two hours, laboratory practice three hours a week.

PROFESSOR ELLIOTT,  
ASSISTANT PROFESSOR ROSEN.

**452. MORPHOLOGY OF FUNGI.** The forms and structure of fungi. Lecture and recitation one hour, laboratory practice eight hours a week.

ASSISTANT PROFESSOR ROSEN.

**453. SYSTEMATIC MYCOLOGY.** Identification and classification of fungi. Lecture and recitation one hour, laboratory practice eight hours a week.

PROFESSOR ELLIOTT.

**454. DISEASES OF FOREST TREES.** The important diseases of forest trees with special emphasis on timber rots. Lecture and recitation one hour, laboratory practice eight hours.

ASSISTANT PROFESSOR ROSEN.

**435-6-7. PLANT PATHOLOGY METHODS.** The preparation of various artificial nutrient media and the technique of isolating and culturing parasitic fungi and bacteria. Emphasis will be placed

on bacteria in relation to plant diseases. Lectures and recitations one hour, laboratory practice four hours a week throughout the year.

PROFESSOR ELLIOTT,  
ASSISTANT PROFESSOR ROSEN.

536-7-8. **PATHOLOGICAL PLANT ANATOMY.** The structure of diseased and dead host tissues with relation to the disease producing organism. Offered only to students who choose a major in Plant Pathology or Botany, or for graduate credit.

PROFESSOR ELLIOTT,  
ASSISTANT PROFESSOR ROSEN.

521-2-3. **PLANT PATHOLOGY RESEARCH.** A special problem to be assigned only to students who take Plant Pathology as a major

PROFESSOR ELLIOTT.

## VETERINARY SCIENCE

PROFESSOR GOW, ASSISTANT PROFESSOR SYFERD

### COURSES

Title	No.	Credits	Prerequisites
Comparative Anatomy .....	(Vet. Sci. 241)	4	None
Animal Physiology .....	(Vet. Sci. 331)	3	Vet. Sci. 241
Animal Diseases .....	(Vet. Sci. 332)	3	Vet. Sci. 241, 331

241. **COMPARATIVE ANATOMY.**—Planned to give the student a general idea of the development and structure of the different domesticated animals during embryonic life and until maturity, so that he can realize and understand the benefits to be derived from proper breeding and care of farm animals. Lectures and recitations four hours a week.

ASSISTANT PROFESSOR SYFERD.

331. **ANIMAL PHYSIOLOGY.**—Intended to give the student a useful knowledge of the functions of the body of the various farm animals, so that he can realize and understand the benefits to be derived from the judicious application of proper breeding, feeding, and care of farm stock. Lectures and recitations three hours a week.

ASSISTANT PROFESSOR SYFERD.

332. **ANIMAL DISEASES.**—Infectious and non-infectious diseases, their causes, symptoms, and prevention; lameness, its causes, diagnosis, prevention and cure; obstetrics; simple sur-



gery; sanitation; State and Federal live stock regulations. Lectures and recitations three hours a week.

ASSISTANT PROFESSOR SYFERD.

## AGRICULTURAL EXPERIMENTAL STATION

### PURPOSE

The purpose of the Experiment Station is to determine facts, work out problems, and make investigations that have a bearing upon the agriculture of the state and the country in general. The results of investigations are published in bulletin form and distributed free. All information in possession of the various departments of the institution is available to citizens of the state upon request. The farmer is in this way relieved of the time, labor, and expense involved in working out experiments for himself. He also receives the benefit of facts that only the best trained specialists are capable of determining. Practically all of the agricultural information that we possess and put into practice is based upon experiment station effort.

### STAFF

The working staff of the Experiment Station is practically identical with the teaching force of the College of Agriculture. Members of the staff are required to do both teaching and research work in their respective fields. The work of the station is continuous throughout the year. Research work constitutes the major burden of the staff.

The *Department of Agronomy* carries on investigations with farm crops, testing and breeding new and pure varieties of cotton, corn, grains, grasses for hay and pasture, clovers, and other agricultural crops. It also conducts experiments in soil fertility and the management of soils for different crops. This work is carried on at the experimental farms, at the main station and the sub-station. A special feature is the work with cotton and corn at the sub-station at Scotts.

The *Department of Animal Husbandry* carries on investigations in feeding, breeding and management of farm animals, including poultry. Well selected herds of dairy cattle, beef cattle, and hogs are maintained for this purpose. A well equipped and well stocked poultry plant is also maintained. In connection with this department, a model dairy, equipped with improved dairy

machinery and laboratories, is conducted for instructional and experimental purposes.

The *Department of Bacteriology* conducts investigations and research relative to the causes and character of animal diseases and means of combating them.

The *Department of Agricultural Chemistry* carries on investigations in the application of chemistry to agriculture. Its laboratories are fitted with improved modern apparatus.

The *Department on Entomology* conducts investigations in life histories of insects injurious to agriculture and methods of exterminating such insects.

The *Department of Horticulture* is equipped with grounds, machinery and laboratories suitable for conducting experiments in fruit growing and vegetable gardening. Problems of practical importance are worked upon experimentally to aid the grower in his cultural work. Variety study of fruits and vegetables, pollination of the apple, orchard fertilization, pruning and grading and packing experiments are major projects for experiments in this department.

The *Department of Plant Pathology* carries on investigations of plant diseases with reference to their nature, cause of development, and means of combating and eradicating them. The department is equipped with excellent apparatus for its investigations.

The *Department of Veterinary Science* supervises state inspection for contagious diseases of animals and for the eradication of cattle tick. It operates the state serum plant and supplies serum at cost; it investigates also the best means of checking and stamping out diseases of animals.

# AGRICULTURAL EXTENSION DIVISION

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W. C. LASSETTER, *Director.*  
L. C. MOSER, *Editor.*

## COUNTY AGENT WORK

J. C. BARNETT, *District Agent.*  
H. F. KAPP, *District Agent.*  
J. E. MCKELL, *District Agent.*  
H. K. THATCHER, *District Agent.*  
S. P. WEIGART, *District Agent.*  
*Fifty-eight County Agents.*

## HOME DEMONSTRATION WORK

MISS CONNIE J. BONSLAGEL, *State Home Demonstrating Agent.*  
MISS SALLIE CHAMBERLIN, *District Agent.*  
MISS FRANCES COOPWOOD, *District Agent.*  
MISS SARA L. FORTINBERRY, *District Agent.*  
MISS CARRIE PLUNKETT, *District Agent.*  
MRS. ELIZABETH TEMPLE, *District Agent.*  
*Forty-one County Home Demonstration Agents.*

## CLUB WORK

W. J. JERNIGAN, *State Boys' and Girls' Club Agent.*

## SPECIALISTS

L. I. CASE, *Beef Cattle.*  
MISS GERTRUDE E. CONANT, *Cookery.*  
W. H. LANEY, *Assistant in Marketing.*  
H. B. LANSDEN, *Poultry.*  
A. D. MCNAIR, *Farm Management.*  
T. ROY REID, *Assistant in Marketing.*  
J. H. TULL, *Marketing.*  
W. H. WOODLEY, *Dairy Specialist.*

## NEGRO WORKERS

H. C. RAY, *District Agent.*  
*Nine Local County Agents.*  
MARY L. RAY, *District Agent.*  
*Eleven Local County Agents.*

## AGRICULTURAL EXTENSION SERVICE

**PURPOSE.** The leading purpose of all colleges and universities, until within the last quarter century, was to educate a few boys and girls of the best classes of society for the scholarly or professional vocations. Until recently the public did not expect even its own public educational institutions to perform any service beyond the teaching of those who voluntarily sought instruction within their walls. A broader and nobler idea has recently influenced the activities of state universities and colleges, namely, that of serving all of the people. The College of Agriculture desires to extend its campus to the limits of the state and for that reason the Division of Agricultural Extension was organized.

**SOURCES OF MAINTAINANCE.** The Division of Agricultural Extension is supported jointly by the College of Agriculture of the University of Arkansas and the United States Department of Agriculture under the provisions of the Smith-Lever Act passed by Congress in June, 1914. In addition to the federal funds appropriated by the College of Agriculture for conducting extension work, and the state funds appropriated as an offset to the federal appropriations, the Department of Agriculture, through the States Relations Service has allotted to the Division of Extension certain sums to be used in the furtherance of the work.

**SCOPE OF WORK.** The Division of Agricultural Extension endeavors to reach the maximum number of people throughout the state and for that purpose several lines of activities are planned. Among these are the county agent work, the home demonstration agent work, boy's and girls' club work, home economics study clubs, farm meetings, marketing service, farmers' clubs, farm schools, cooking schools, curing and marketing meats, farm management, and personal instruction on the part of specialists in the various lines of agricultural study. The basis of agricultural extension work is actual practical demonstrations since this has been found through experience to be the most effective method. This applies also to other phases of extension work.

**COUNTY AGENTS.** The farm demonstration work is conducted through the organization of county agents who are made responsible for the agricultural interests of the counties to which they are assigned, and whose duty it is to conduct demonstrations in the growing of the various farm crops adapted to the county, in the introduction, care, and management of live stock, in farm management, in marketing, in the organization of community clubs for the promotion of community betterment work,

in conducting boys' corn, cotton, peanut and pig clubs, and for the giving of instruction in any other way advisable and effective in their counties.

**COUNTY HOME DEMONSTRATION AGENTS.** For this work, women trained in home economics and having ability in dealing with household problems and matters affecting the home are employed, according to the plan of the county agents' work. Their duties lie in giving instruction in those things pertaining to the welfare of the home. They organize girls' tomato and garden clubs, teach women and girls to can the fruits and vegetables, organize women's home demonstration clubs and through these organizations teach the best methods pertaining to home work. Their entire work looks to the welfare of the homemakers through giving instruction in good housekeeping.

Two-day cooking schools in home economics, where instruction in matters of great importance to the housekeeper is given, are held by specialists in this field. These schools are available to any community in the state upon request.

**BOYS' AND GIRLS' CLUB.** Specialists in club work are provided for the proper supervision of the boys' and girls' club work and to assist the county agents and home demonstration agents in organizing and properly developing this work. This service is designed to teach the boys and girls the simplicity of ways of improving the farm and home, to open up to them a brighter view of the future and to inspire them with the desire to remain on the farm and develop it to its fullest possibilities. This may be classed as the initial step in the teaching of agriculture in that it reaches the boys and girls between the ages of ten and eighteen before they have had the opportunity to secure such training in the schools and colleges.

**SPECIALISTS.** The county agents and home demonstration agents are required to serve the people on all problems, and their training, therefore, must be general. Since this prohibits a high degree of specialization, it is necessary to supply assistance through men trained in more highly specialized fields. This service to the county agents is necessary to enable them to handle some of the more difficult problems of their counties. Specialists, therefore, are supplied in livestock, soils and crops, horticulture, and home economics.

**FARMERS' MEETINGS.** In season it is intended that the extension service through farmers' meetings shall reach every county in the state. Special campaigns along lines of greatest importance are organized and promoted in season. This work is pushed at times when farm work is the lightest.

**MARKETING SERVICE.** In co-operation with the Office of Markets and Rural Organization, a specialist in marketing is provided to assist farmers in securing markets for their products. This service is designed to bring the producer and the buyer into touch with each other, but the Division of Extension takes no further part in consummating sales. The marketing service goes further in that it encourages the organization of groups of farmers for the production of various products in carload lots and gives instruction in the proper grading and packing of fruits and other farm products. During the fall, special assistance is detailed by the Office of Markets for the purpose of grading and classifying cotton for the benefit of the farmers. The marketing of any farm product will be included in the activities of this sphere of extension work.

**CURING AND MARKETING OF MEATS.** A specialist in the Division of Extension has given instruction to ice plants in the state and assisted them in so arranging their plants as to utilize waste space in the curing of meats and has instructed them in the best methods for this purpose. This has opened a market for the small farmer and in this way has encouraged a greater production of hogs.

**LIVESTOCK INTRODUCTION.** Because of certain economic factors not under control, the class of livestock in Arkansas has been decidedly poor. With the control of the disturbing factors, the necessity arose for the introduction of pure-bred breeding stock. The livestock specialists have turned their attention to that matter and through special organization work in many counties have introduced many carloads of good breeding stock, and through farmers' meetings, the press, and otherwise, have developed a strong public sentiment in favor of this work. The boys' pig club work is one of the greatest factors in the introduction of pure-bred hogs.

**FARM MANAGEMENT.** Preliminary surveys of farms in some sections of the state have shown that the profits are far from what they should be. Farm management studies naturally should be one of the foremost in agricultural teaching. Proper investigation of farm management conditions and the teaching of the best methods of farm management are of utmost importance. This work is provided for through the employment of a specialist in farm management.

**FARM IMPLEMENTS.** Economy in any business undertaking demands the use of labor-saving machinery of the most approved type. A specialist, therefore, is provided to make a careful survey of each of the sections of the state with a view to determining the types of farm implements of greatest economic value to



those sections, and for giving instruction in the use of machinery of these improved types. This service will be extended to the farmer through demonstrations and to the retail dealers as well.

**AGRICULTURAL NEWS SERVICE.** Agricultural facts must be placed before the people. The co-operation of the press is utilized through supplying to the three hundred twenty-five papers of the state weekly paragraphs on better farming. Special articles dealing with seasonal topics are prepared for the county papers. Special articles for the daily papers of the state are prepared in order that facts may be brought before a large number of people. Further than this, the Division of Extension issues publications from time to time which are available to the people of the state upon application.

## SUMMER TERM

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The tenth summer term of the University will open June 21, and close July 31, 1920.

The University summer school has grown during recent years until last year four hundred students were in attendance, which is a larger number than the average summer school in the United States. The report of the United States Commissioner of Education shows that the cost of attending the session was only slightly more than two-thirds the cost of attending such a summer session in the average school of like grade.

Courses in preparatory and college subjects will be offered by a faculty composed almost wholly either of heads of departments in the various faculties of the University, or of experts of recognized ability from other states. A model school will be conducted for the demonstration of the best methods of teaching in the primary and grammar grades. The University Training High School will be in session and will be in the hands of some of the best superintendents of schools in Arkansas. One unit of entrance credit may be secured during the summer school. A limited amount of practice teaching can be done.

Courses completed in the summer term will be credited toward a degree, providing that entrance requirements have been met. Ten term hours is the maximum that may be earned at any one session. It should be noted that by attending several summer terms a student's college course may be shortened to three or three and a half years.

Courses for freshmen in all of the four colleges of the University, Arts and Sciences, Agriculture, Education or Engineering, will be offered, and graduates of high schools are particularly urged to begin their college work in June instead of September. Courses will be offered this summer in all three phases of Smith-Hughes work in vocational education, namely, in agriculture, home economics, and in industrial arts.

All the facilities of the College of Agriculture and of the state experiment station are open to the Smith-Hughes men in agricultural education, and all the men teaching these courses in the high schools of the state are required to attend by the federal government.

Each year sees an increasing number of courses offered for graduate study. Several students have completed the required work for their Master's degree by summer work.

During Schoolmen's Week, in the latter part of the Summer School, it is the custom of the superintendents and principals from all parts of Arkansas to gather at the University for a study of their own peculiar problems, at which time they are addressed by some of the leading school specialists of the country, brought here by the University.

More detailed information in regard to the courses offered, matriculation and registration, may be had from the Summer Term Bulletin, which will be sent upon request. Address requests for information to Registrar, University of Arkansas, Fayetteville, Arkansas.

In order to assist the women of the state to appreciate fully their new duties as citizens and voters, the General Extension Division, with the cooperation of the Arkansas League of Women Voters, will conduct a School of Citizenship for Women at the University during the week beginning July 19.

Among the short courses offered by experts in their respective fields are the following:

History of Suffrage in America.

The Nation.

How the Nation Is Financed.

Political Parties.

Home Economics.

State Government.

The Status of Women under the Laws of Arkansas.

The women students in the summer session may take this short course in citizenship upon payment of a special registration fee of two dollars.

For further information address Dr. A. M. Harding, Director of the General Extension Division, University of Arkansas, Fayetteville, Arkansas.

# SCHOOL OF MEDICINE

## HISTORY.

The School of Medicine was organized at Little Rock in 1879. In 1911 it was consolidated with the College of Physicians and Surgeons, and by an act of the general assembly became the School of Medicine of the University of Arkansas.

## ADMISSION

Admission requires a four-year high school education, and, in addition, two years of college work as set forth below.

## HIGH SCHOOL REQUIREMENTS

Four years work in an accredited high school or its full equivalent, comprising not less than fifteen Carnegie units\* in acceptable subjects, including prescribed work as follows:

English.....	3 units
Algebra.....	1 unit
Plane Geometry.....	1 unit
Latin, Greek, French, German or other foreign language.....	2 units (both units in the same language).
History.....	1 unit
Electives .....	7 units
Total.....	15 units.

Deficiencies in any of the above described high school work may be made up by extra college work in the same subjects.

## COLLEGIATE REQUIREMENTS

Two years work in a recognized college or university, comprising not less than sixty semester hours†, including prescribed subjects, as follows:

Chemistry (See Note A) .....	12	semester hours†
Physics (See Note B) .....	8	" "
Biology (See Note C) .....	8	" "
English (See Note D) .....	6	" "
Electives (See Notes E. and F.) .....	26	" "
Total.....	60	" "

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\*A unit in a subject is the credit value of work in that subject for four recitation periods per week for thirty-six weeks. Each recitation period must be at least forty minutes in length.

†A semester hour is the work represented by one class period per week for half of the college year (at least thirty-two weeks). Each laboratory period to be so evaluated must extend over at least two hours.

NOTE A. CHEMISTRY.—Of the twelve hours at least eight semester hours must be in general inorganic chemistry, and at least four semester hours must be laboratory work. The remaining hours may consist of analytical or organic chemistry.

NOTE B. PHYSICS.—At least two of these eight semester hours must consist of laboratory work. This requirement may be satisfied by six semester hours of college physics, of which at least two must be laboratory work, if preceded by one year (one unit) high school physics.

NOTE C. BIOLOGY.—At least four of the eight semester hours must be laboratory work. This requirement may be satisfied by eight semester hours in either general biology or zoology, or by courses of four semester hours each in zoology and botany; but not by work in botany alone.

NOTE D. ENGLISH.—The usual introductory college course of six semester hours in English composition and literature or its equivalent is required.

NOTE E. FRENCH, SPANISH, ITALIAN OR GERMAN.—French is preferred, and students are strongly urged to secure a reading knowledge of this language. This will ordinarily require at least two years work in the high school, followed by at least six semester hours work in the same language in college, or two years work (at least twelve semester hours) if the language was not begun in the high school.

NOTE F. ELECTIVES.—As desirable electives, the following subjects are suggested: Additional English; chemistry; zoology; psychology; an additional modern language; economics; college algebra, and trigonometry; sociology; history; political science; logic; Latin; Greek; drawing.

#### CONDITIONS NOT PERMITTED

No substitutes are allowed for the above prescribed subjects. No entrance conditions are permitted.

Candidates for admission who, in June, 1920 have completed the above requirements with the exception of a few hours of college subjects, should plan to make up their deficiencies by attendance at a summer session during the summer of 1920.

## COURSE OF STUDY

The School of Medicine offers a four-year course leading to the degree of *Doctor of Medicine* (M. D.).

The candidate must meet the entrance, residence, and registration requirements; must be twenty-one years of age; and must present satisfactory evidence of good moral character. The candidate must have attended and satisfactorily completed four courses of lectures, no two of which shall have been attended in the same calendar year. Three years of the required work may have been done in some other medical college of recognized standing whose requirements are equivalent to those of this college. The senior year must be done in residence at this college.

The School of Medicine will grant the degree of *Bachelor of Science in Medicine* (B. S.) to students who have complied with the following requirements:

1. The student must have completed two full years of work leading to the bachelor's degree in the University of Arkansas or some other standard college or university, maintaining an entrance requirement of not less than fourteen standard high school units and requiring not less than sixteen hours of recitations and lectures per week in the college course.

2. The student must have included in his two years of preliminary college work on all subjects required for entrance to the first year of the School of Medicine of the University of Arkansas.

3. The student must have completed all of the work in the first two years of the medical course in the School of Medicine of the University of Arkansas.

4. This degree shall not be conferred upon any except persons who are at the present time students in the School of Medicine of the University of Arkansas or upon those who shall enter that college hereafter.

## FEES AND EXPENSES

Tuition Fee, per annum.....\$50.00

There are no other fees, but a ten dollar deposit to cover breakage is required. After the necessary deductions, the balance of the deposit is refunded.

Board and lodging, including fuel and lights, may be had at a course of five to seven dollars a week, or of twenty to thirty dollars a month.



## BUILDINGS AND EQUIPMENT

The main building, erected in 1890, is a three-story brick structure containing a lecture hall, amphitheatre, museum, dissecting room, and laboratories. A second building, occupied chiefly by laboratories, has been outgrown, and the old state capitol is used for laboratories of chemistry, embryology, histology, physiology, pathology, bacteriology, clinical microscopy, surgical pathology, and pharmacology. These laboratories are well equipped with new apparatus and supplies. The space is ample and the rooms are well lighted.

## HOSPITAL AND CLINICAL FACILITIES

*Logan H. Roots Memorial Hospital.* This public city hospital was founded by the late Logan H. Roots. Closed corridors connect the hospital with the college building. The medical and surgical treatment of all cases in this hospital is now entirely controlled by the Medical School.

*Pulaski County Hospital.* This hospital is situated in the southwestern part of the city and has a capacity of two hundred beds. A feature of the hospital is the cottage treatment of tuberculosis.

*The Arkansas State Hospital for Nervous Diseases* has more than 2,200 patients that are available for teaching purposes. The institution maintains a two-hundred bed hospital for those of its inmates that are acutely ill. Nervous and mental bedside clinics are held weekly throughout the year for the senior class. An adequately equipped necropsy room is maintained in which autopsies are held.

*Isaac Folsom Clinic.* This clinic was named in honor of the late Dr. Isaac Folsom, in consideration of his gift of an endowment of \$20,000. This clinic is under the direct and exclusive control of the faculty, and all its material is available for teaching purposes.

*St. Vincent's Infirmary.* St. Vincent's Infirmary, designed solely for the treatment of acute diseases, has a capacity of nearly two hundred beds. The hospital is splendidly equipped and conveniently situated. It is under the supervision and management of Sisters of Charity who are trained nurses.

*State Institutions.* All the eleemosynary institutions of the state are situated in Little Rock. These include the School for the Blind, the School for Deaf Mutes, the State Hospital for Nervous Diseases, the Penitentiary, the Reform School, County and City Hospitals, all of which contribute to the available clinical material.

## HOSPITAL APPOINTMENTS

The following hospital appointments are made annually: Logan H. Roots Memorial Hospital, two resident physicians; University Hospital, two resident physicians; St. Vincent's Infirmary, two internes; Pulaski County Hospital, four internes; State Hospital for Nervous Diseases, ten internes. Appointments are made by competitive examinations open to graduates of the School of Medicine.

## ANNOUNCEMENT

For further information in regard to the School of Medicine, address the Dean of the School of Medicine, University of Arkansas, Little Rock, Arkansas.

# BRANCH NORMAL COLLEGE

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## HISTORY

The Branch Normal College is situated at Pine Bluff, Arkansas. It was established pursuant to an act of the general assembly of Arkansas, April 27, 1873, and has been in operation since 1875.

Its purpose is to provide industrial education and to train teachers for efficient service in the colored public schools of the state.

## BUILDINGS AND EQUIPMENT

The school property consists of twenty acres of land in the western suburbs of Pine Bluff.

The buildings include a two-story school building, containing an assembly hall, well equipped mechanical shops, a dormitory for women, a dormitory for men, a primary training school, and a two story girl's industrial building.

## ADMISSION

Candidates for admission must be at least thirteen years of age, and must pass a satisfactory examination in arithmetic, English grammar, geography, and United States History, such as is covered in the fifth grade. Those coming from other schools must furnish evidence of satisfactory deportment and class standing.

## COURSES OF STUDY

*Preparatory Department.* In the preparatory department the foundation academic subjects are studied. The work corresponds to that of the sixth, seventh, and eighth grade in the public school.

*Normal Department.* The purpose of the normal department is to prepare students for teaching. Admission is based upon the completion of the preparatory course. Students who pass the prescribed course of study satisfactorily will be awarded a teacher's certificate.

*Industrial Department.* Beginning with the second year in the preparatory department, all students are required to pursue

certain industrial courses. The industrial work extends through four years, and the completion of the work is attested by a certificate of efficiency.

Young men do shop work in mechanic arts, carpentry, and cabinet making, and have the opportunity to become skilled auto mechanics, blacksmiths, machinists, engineers, or firemen.

Young women are taught plain sewing, cutting and fitting, art needlework, cooking, and millinery.

*Agricultural Department.* In this department two courses of study are offered, one designed especially for students who are preparing to teach in the public schools, and a second course, for those who wish to specialize in agriculture. The latter course includes work in agronomy, farm economics, and kindred subjects.

#### FEEES AND EXPENSES

Matriculation Fee (paid annually by all students)-----	\$5.00
Entrance fee( paid annually by all non-resident students and by all others who do not hold beneficiary ap- pointments)-----	5.00
Dormitory fee (including board, fuel, and light, paid by all women students at the beginning of each month)-----	12.00
Student activity fee (paid by all students at the begin- ning of the year)-----	1.00

Beneficiary students may be appointed by the county judge of each county in the state. Students who receive these appointments pay no entrance fee.

#### ANNOUNCEMENT

For further information in regard to the Branch Normal College, address the Superintendent, Branch Normal College, Pine Bluff, Arkansas.

# DEGREES, DIPLOMAS AND CERTIFICATES.

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CLASS 1919

DEGREES.

## BACHELOR OF ARTS

James Elbert Bradley	Catherine Kerr
Margaret Braswell	Gladys McCullough
Nellie Cole	W. D. McFarlane
Jeff Davis (as of Class of 1917)	Alma Miller
Henry Shibley Dunn	William Eugene Mullins
Eleanor Gilliam	Evangeline Pratt
Ruth R. Grabel	John Gails Ragsdale
Irving Mitchell Greer	Una Mae Ross
Walker Clifton Hay	Robert Lionel Searcy
Lawrence Brooks Hays	Olive Edwards Stewart
Agnes Belle Hendricks	Gibson Witt, Jr.
Amelia Doriot Hilton	Blanche O'Bar
Scot Johnson (as of Class of 1917)	Allen Alderson Zoll (as of Class of 1917)

## BACHELOR OF SCIENCE IN EDUCATION

Pearl Gollaher

## ELECTRICAL ENGINEER

William E. Douglas

## MECHANICAL ENGINEER

William Terry Feild

## BACHELOR OF CHEMICAL ENGINEERING

Robert Renic Logan

## BACHELOR OF SCIENCE IN CHEMISTRY

Everette Lee Henderson

## BACHELOR OF CIVIL ENGINEERING IN HIGHWAYS

John Homer Knott

## BACHELOR OF CIVIL ENGINEERING

Franklin H. Morrow

## BACHELOR OF ELECTRICAL ENGINEERING

William Martin Cantrell	William Lewdy Teague
Robert Morris Cherry	William Oakley Turner
Frank Davis Pape (as of Class of 1917)	

## BACHELOR OF MECHANICAL ENGINEERING

Ray Lafaure Belknap

George Dewey Conley

Julius Clark Moody

## BACHELOR OF SCIENCE IN AGRICULTURE

Henry A. Lucas

Bryan Stearns

Harvey Alexander York

## BACHELOR OF SCIENCE IN HOME ECONOMICS

Linnie Ayres

Bess Pearl Hodges

Frances Bailey

Madge Johnson

Estella Evatt

Virginia Bell Neelly

Velma Smith

## CERTIFICATES

## TEACHER'S CERTIFICATES

Eloise Belvins

Effie May Bridewell

Nina Cotton

Cornelia Crozier

Hellen Lucile Crump

Sarah Isabelle Duncan

Rosalie C. Fontaine

Pearl Gollaher

Creedy Elizabeth Hamilton

Rena Idelle Harrington

Ruth Henderson

Annie Clara Irby

Pearl Lane

Georgia Grace Lee

Maxine Marshall

Josephine Martin

Emma Louise Metzger

Winnie Mitchell

Kate Owsley

Jeane Porter

Grace Porter

Helen Louise Pyle

Chloera Robinson

Mary Davis Sanders

Mary Dale Sellers

George Alice Sheeks

Lucile K. Simpson

Bernice Slaughter

Douglas O. Smith

Lillian Vera Spikes

Mary Bob Sullivant

Helena Vickers

Louise Wallace

Bessie Merle Wells

Willie McLees

## TEACHER'S CERTIFICATE IN HOME ECONOMICS

Bess Pearl Hodges

Virginia Belle Neelly

Patricia Irby

Velma Smith

Madge Johnson

Emma White

## DIPLOMA IN VOICE AND PIANOFORTE

Orchid Erie Peden

## DIPLOMA IN PIANOFORTE

Nellie Cole

Charlye Vera Forrester

Augusta Louise Simpson



## GRADUATION HONORS

Julius Clark Moody  
 William Lewdy Teague  
 Everette Lee Henderson  
 Agnes Belle Hendricks  
 Madge Johnson

## CLASS HONORS

Agnes Belle Hendricks  
 William Lewdy Teague  
 Everette Lee Henderson  
 Julius Clark Moody  
 Nellie Cole  
 Estella Evatt  
 Madge Johnson

Irving Mitchell Greer  
 Robert Morris Cherry  
 William Martin Cantrell  
 James Elbert Bradley  
 Lawrence Brooks Hays  
 Catherine Kerr

## DEPARTMENTAL HONORS

*Biology*  
 Estella Evatt (first)  
*Chemistry*  
 Everette Lee Henderson (first)  
*Civil Engineering*  
 John Homer Knott (first)  
*Electrical Engineering*  
 William Lewdy Teague (first)  
 Robert Morris Cherry (second)  
 William Oakley Turner (third)  
*English*  
 Nellie Cole (first)  
 Amelia Doriot Hilton (second)

*French*  
 Nellie Cole (first)  
*History*  
 Irving Mitchell Greer (first)  
 Agnes Belle Hendricks (second)  
*Latin*  
 James Elbert Bradley (first)  
*Mathematics*  
 William Lewdy Teague (first)  
 Julius Clark Moody (second)  
*Mechanical Engineering*  
 Julius Clark Moody (first)  
 Ray Lafaure Belknap (second)

*Home Economics*  
 Madge Johnson (first)

## UNIVERSITY SCHOLARS

1919-1920

*Name*  
 Katherine Andrews  
 Denver L. Brashier  
 Edith Burgess  
 Beryl Clark  
 Ernest Crossno  
 Martha Hill  
 Vestal Johns  
 Opal Morris  
 William L. Ritchie  
 Vera Slaughter  
 Brice Smith  
 Grover Zinn

*High School*  
 Fort Smith  
 Waldron  
 Marianna  
 Rogers  
 Ozark  
 Prairie Grove  
 Paris  
 Mammoth Springs  
 Helena  
 Springdale  
 Wynne  
 El Dorado

# LIST OF STUDENTS.

1919-1920

## EXPLANATION OF ABBREVIATIONS.

A	College of Arts and Sciences
E	College of Engineering
Ag	College of Agriculture
Ed	College of Education
F	Freshman
So	Sophomore
J	Junior
Sr	Senior
Sp	Special
Gr	Graduate
T	Trade Course
Mu	Music
Pre-Med	Pre-Medical

Name	Course	Home Address
Abrams, Ann Elizabeth	A-Mu	Gurdon
Adams, Henrietta Trulock	A-F	Pine Bluff
Adams, Julian Alexander	A-F	Little Rock
Adams, Quincy Dalton	A-J	De Valls Bluff
Adams, Roberta Marietta	A-Sp	Fayetteville
Agee, Owen Frank	F-Pre-Med	Ozark
Albright, Spencer Delancey, Jr.	A-So	Fayetteville
Albritton, Louis Elwyn	E-Sp	Texarkana
Alcorn, Hal Stuart	Ag-So	Lake Village
Alcorn, Mary	A-F	Lake Village
Alcorn, Robert Elmore, Jr.	Ag-Sp	Lake Village
Allen, Dan McIlroy	Ag-Sp	Fayetteville
Allen, Saed	T	McAllen, Texas
Allen, Winifred Switzer	A-F	Wichita, Kansas
Alley, Effie	A-J	Little Rock
Alley, Lady Maude	Ed-F	Dardanelle
Amis, William	A-F	Fordyce
Amis, William Hopper	A-F	Fort Smith
Amos, Claude Howard	E-F	Poteau, Okla.
Anderson, Charlotte S.	A-Mu	Clarksville
Anderson, Elmer J.	T	Louann
Anderson, Lance Dewey	E-Sr	Fayetteville
Andrews, Emily Katherine	A-Mu	Fort Smith
Argo, Marion Lee	A-So	Cotton Plant
Askew, Benjamin Reynolds	E-So	Fayetteville
Askew, Margaret	Ed-F	Fayetteville
Atkinson, Mary Alzira	Ed-F	Berryville
Atkinson, Mary Ella	A-F	Pine Bluff
Aubrey, Elizabeth	Ed-Sp	Little Rock
Austin, R. C.	T	Newcastle, Wyo.
Ayers, Walter William	E-Sp	Fort Smith
Backstrom, Jessie Anderson	Ag-J	Fayetteville
Bagby, John	A-F	Lake Village
Bailey, James Wallace	A-F	Russellville
Bain, James O.	A-J	Portland
Barnett, Orville	T	Bonanza
Barr, Frederick Elgin	Ed-F	Hope
Barrett, Joe C	A-Sr	Jonesboro
Barrett, Lois	Ag-Sr	Jonesboro
Barrett, Zora Edna	A-F	Jonesboro

Name	Course	Home Address
Barton, Lela Viola	A-So	Fayetteville
Barton, Loy Edgar	E-J	Fayetteville
Baskin, Clara	Ed-Sr	Wheeler
Basore, George Marion	E-F	Berryville
Bassett, Lucy Theresa	Ed-So	Fayetteville
Bates, Margaret Amelia	Ed-So	Fayetteville
Baugh, William Leon	E-So	Conway
Bayne, William Jasper	Ag-F	Brinkley
Bayne, Robert Emmet	A-So	Brinkley
Beard, Mary Edith	Ed-So	Corning
Beasley, Edward C.	E-F	Texarkana
Beasley, George Herschel	A-J	Texarkana
Beauchamp, Stonewall Jackson, Jr.	A-So	Little Rock
Bell, Bunn McFaddin	A-F	Fayetteville
Bell, George	T	Oklona
Belzner, Mary Barbara	Ed-So	Camden
Bennett, Joe Gordon	Ag-F	Paris
Bennett, Lucy Elizabeth	Ag-Sr	Paris, Texas
Bennett, Milton Chester	Ed-F	Pocahontas
Berson, Julian Lucile	Ed-F	Fort Smith
Betts, Robert Chambers	Ag-Sp	Columbus, Miss.
Bird, Nora Elizabeth	Ed-F	Waldron
Bishop, Neville	Ed-F	Pocahontas
Black, Dorothy Miller	A-So	Little Rock
Black, Ella May	Ed-F	Russellville
Black, John Clinton	E-J	Bentonville
Blackburn, Archie	E-F	Clarksville
Blaine, Thomas Burnet	Ag-So	Hardy
Blakeley, Mae Isabel	Ag-Sp	Marvell
Bland, Lucille	A-F	De Valls Bluff
Blanks, Aubrey G.	A-J	Hamburg
Blomens, Elouise	A-J	Dardanelle
Blodgett, George Frank	A-F	Jacksonville
Boatright, Charles Baxter	Ag-Sr	Berryville
Bocquin, Martin Theurer	Ag-F	Fort Smith
Booker, Jack Watson	E-F	Fort Smith
Bonds, Allie Bernice	A-So	Russellville
Bond, George William	Ed-J	Summers
Boozier, Charles Cecil	E-Sp	Fayetteville
Bordeaux, Hazel	A-F	Little Rock
Bossemeyer, James Lee	Ag-So	Fayetteville
Bouldin, Edna Macon	Ed-J	Mineral Springs
Boyce, Helen Cecilia	Ed-So	Pine Bluff
Boyd, Bernice Isabel	Ed-So	Fayetteville
Boykin, Erastus	T	Mist
Bracy, Helen	A-F	Little Rock
Brammer, Greeley C.	F. S.	Lawton, Okla.
Brandon, Benton D.	E-Sp	Little Rock
Brann, Wallace Hurst	A-Sp	Fayetteville
Brashears, Alpha	Ed-Sp	Delaney
Brashears, Bonnie	Ed-Sp	Combs
Brashears, Clyde	Ed-Sp	Combs
Brashears, Harold Jennings	Ed-Sp	Delaney
Brashier, Denver Legette	A-F	Waldron
Bratton, Ulysses Simpson, Jr.	A-F	Little Rock
Brazil, Ernest	E-J	Bauxite
Brennen, Robert	T	Alvin, Texas
Brewer, William Myrtle	E-So	Fayetteville
Brewster, Lillian Alice	Ed-So	Fayetteville
Britt, James Eric	E-F	Bentonville
Brooksher, Lucille	A-F	Fort Smith
Brown, Vollie	T	Pineland, Texas

Name	Course	Home Address
Broome, Faye Elbertine	A-Mu	Bentonville
Brown, Harvey Holman	F-Pre-Med	Walnut Grove
Brown, James Lemuel	E-F	Little Rock
Brown, Mazillah	Ed-F	Walnut Grove
Brown, Olivia Augusta	Ed-F	Dardanelle
Bucksen, Paul Kelly	Ag-Sp	Morrilton
Burgess, Edith Lois	A-F	Marianna
Burke, Zealia Belle	Ed-F	Lexington
Burnau, Henry Thompson	T	Abilene, Texas
Burr, George Oswald	A-Gr	Conway
Burroughs, Asa Brice	A-F	Little Rock
Butt, Vinvela	A-So	Little Rock
Cabell, Joe	A-Sp	Fort Smith
Cain, Agnes	Ed-So	Dardanelle
Caldwell, Estus Everett	A-F	Camden
Caldwell, Robert A.	Ag-Sp	Memphis
Calhoun, Zachary Herman	Ag-So	North Little Rock
Campbell, William Errington	E-So	Fayetteville
Camp, Alonzo De Allyion	A-Sp	Patmos
Canfield, Eugene Hunter	A-F	Canfield
Cannon, Mary Frances	Ed-F	Marianna
Carl, Beulah	Ag-J	Gentry
Carl, Clara Mabel	A-Mu	Prairie Grove
Carson, Mary Holland	A-Mu	Bentonville
Carpenter, Edna Fay	Ed-So	Fayetteville
Carroll, Mamie Lou	A-Sr	Charleston
Carruth, Mary Elizabeth	Ed-So	Ursula
Carter, Georgia Gertrude	Ed-So	Helena
Carter, Willard Scott	E-F	Fayetteville
Cawhorn, Eugene Edgar	E-Sp	Atkins
Chaffin, Perry Milton	F-Pre-Med	Talequah, Okla.
Chandler, Florence Clyde	A-F	Fayetteville
Charlesworth, Myrl	A-Sp	Fayetteville
Chotard, Elizabeth Barnard	A-Sr	Lake Village
Christian, Lee Evans	A-F	Portland
Ciasnocho, Thomas	T	Buffalo, N. Y.
Clardy, Chester	Ag-So	Malvern
Church, George Lucian	E-Sp	Little Rock
Clark, Aura Clarence	A-Sr	Van Buren
Clark, Alvin D.	E-F	Ozark
Clark, Frank Andrew	A-F	Waldo
Clark, Howard Payne	A-Sp	Waldo
Clark, Howard Rupert	E-So	Springdale
Clark, Kittie Beryl	Ed-F	Rogers
Clarke, Vivian	A-Mu	Ozark
Clayton, Walker Beverly C.	A-F	Hardy
Cobb, Jessie Ray	A-F	Fayetteville
Cobb, Irma	Ag-F	Idabel, Okla.
Coffey, Opal	A-So	Fayetteville
Coker, Alice Edith	Ag-Sr	Fayetteville
Colbert, James C.	A-J	Minden, La.
Colbert, Katherine Chinn	A-So	Minden, La.
Coleman, Hughlett Lyell	Ed-F	Pine Bluff
Coleman, James Weatherby	Ed-Sr	Strong
Coleman, Samuel Wallace	E-Sp	Strong
Coleman, Mildred Marguerite	A-So	Dermott
Collamore, Loftus	E-Sp	Little Rock
Collum, Walter Cecil	Ed-F	Alma
Compton, John Nye	A-F	Little Rock
Conner, Mildred	A-F	Fayetteville
Conner, Nell	A-Sp	Paris, Texas
Conner, Trent	Ag-Sp	Fayetteville

# LIST OF STUDENTS

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Name	Course	Home Address
Cooke, Virgil Eugene	A-F	Marvell
Cooper, Oliver R. A.	Ed-Sr	Bigelow
Cotton, Arthur Butler	A-Sp	Dardanelle
Cotton, William	A-Sp	Fort Smith
Couch, Inez Alice	A-F	Magnolia
Cowan, Bohart Powell	E-Sr	Rogers
Cowden, Pierpont Morgan	A-F	Horatio
Cox, Floyd Hobson	Ed-Sp	Fayetteville
Cox, Hollace Lawton	E-F	Vale
Cox, Jesse E.	A-Sr	Malvern
Cox, Pearl Ray	A-Sr	Farmington
Cranford, Dennis Denny	A-Mu	Sheridan
Cravens, Pauline	A-J	Paris
Crockett, Elizabeth	A-Sr	Fayetteville
Croom, Mally Lane	Ed-Sp	Fort Smith
Crossno, Ernest D.	A-F	Ozark
Cross, Mary Elizabeth	A-So	Pine Bluff
Crowell, La Verne	E-F	Rogers
Crozier, Rachel Flagg	Ed-So	Fayetteville
Crutcher, Byron	Ag-F	Fayetteville
Cummings, Robert Paul	E-So	Springdale
Cunning, John Ed	A-So	Lonoke
Curtis, Harry Burns	E-F	Bentonville
Dale, Jim Kenney	A-Sp	Fort Smith
Daniels, Elmer Austin	E-S	Teawah, Okla.
Daniels, Walter	E-So	Little Rock
Dante, Jack Stiel	A-J	Dumas
Davidson, Gene	A-J	Fort Smith
Davidson, Mary	A-So	Marvell
Davis, Anna Belle	Ed-F	Lowell
Davis, Jessie May	A-F	Lowell
Davis, E. G.	T	Trumann
Davis, Garland	A-Pre-Med	Clarksville
Davis, Leonard Ray	Ed-F	Black Rock
Davis, Lewis Ward	A-F	Little Rock
Davis, Nicie Sue	Ag-F	Shongaloo, La.
Davis, Opal Lillian	Ed-So	Houston
Davis, Richard Seaborn, Jr.	Ag-Sp	Cherry
Dawson, Marian	Ag-Sp	Stephens
Dean, Isabelle Munger	A-So	Portland
Dearing, Fay Kathleen	A-Mu	Prairie Grove
De Arman, Thomas Milton	A-Pre-Med	Miami, Okla.
Deaton, Homer C.	T	Jacksonville, Tex.
Decker, Garland Pierre	E-Sp	Fayetteville
Deen, Eula Elma	Ed-So	Fayetteville
Dever, Clyde	A-Sp	Fayetteville
Dickson, Hugh Clint	E-F	Muskogee, Okla.
Dill, Sam Loid	E-F	Harrisburg
Dobbins, Albert Martin	E-F	Eureka Springs
Dollarhide, Francis De Sales	Ag-Sp	Foreman
Drown, Jesse Frank	T	Cross Roads
Dudley, William Burks	E-Sr	Bentonville
Dulaney, Ernest Bowen	Ag-So	Ben Lomond
Dunn, Julius Caesar	Ed-Sp	Dalark
Dungan, Deadrick	A-So	Little Rock
Durham, Alma Robbie	A-So	Conway
Dutt, Pearl Mary	Ed-So	Fayetteville
Dyer, Ruth	Ed-So	Fayetteville
Dyer, Walter Sherman	E-F	Fayetteville
Earle, John Bayliss	E-So	Fayetteville
East, Jack	A-So	Texarkana
Edens, John J.	T	Bokchito, Okla.

Name	Course	Home Address
Edgar, Nobe	A-F	Newport
Eisenhart, Jack Bond	T	Tulsa, Okla.
Ellis, Catherine	Ed-J	Fayetteville
Ellis, Martha Belle	A-F	Fayetteville
Ellison, Edwin	T	Houston, Texas
Emerson, Odessa Mauree	Ed-F	Rogers
English, Julia Rebecca	A-So	Little Rock
Estes, Wanda Wee	Ed-F	Corning
Evans, Hugh	A-Sr	Dalark
Evans, William Clarence	A-F	Atkins
Ewart, Elsie Ardelia	Ed-So	West Helena
Ewart, James Burns	Ed-J	Booneville
Fairman, Frank Stanley	E-F	Bentonville
Faisst, Bernard	A-F	Benton
Fakes, Roger Edmond	Ag-So	McCrory
Falconer, Falconer A.	A-J	Charleston
Fannin, Maud Foster	A-F	Stigler, Okla.
Farmer, Joseph Kenneth	A-J	Newport
Feemster, Hugh Herbert	A-So	Gentry
Felker, Carl	E-F	Idabel, Okla.
Felsenthal, Sonnel J.	E-So	El Dorado
Fenter, Albert E.	A-Sp	Gurdon
Files, Richard	T	Itasca, Texas
Finn, Michael	Ag-F	Monticello
Fitch, Earl Young	E-So	Carlisle
Fitch, Sterling	A-F	Hindsville
Flanagan, James Clarence	Ag-Sp	Fayetteville
Floyd, James B.	A-F	Yellville
Ford, Harold Lane	Ag-Sp	Ozark
Ford, Merle Esther	Ed-So	Searcy
Foote, Jesse Levon	T	Amarillo, Texas
Forrester, Charlie Vera	A-J	Waldron
Frazier, Waldo	E-F	Ozark
Freeman, Curry Bryan	A-J	Ashdown
Freyschlag, Jessie	Ed-J	Fayetteville
Fulcher, Joseph	A-Pre-Med	Ola
Furr, Beatrice Ionia	A-Sr	Arkansas City
Futrell, Helen	A-F	Fayetteville
Fuqua, Mary	Ed-F	Texarkana
Gaffney, William Claude	E-J	Eudoro
Garner, Sam C.	A-So	Marvell
Garrison, Commodore Dewey	T	Fayetteville
Garrison, Daniel Greene	A-F	St. Joe
Gaston, William	T	Fayetteville
Gay, Clyde Ferdinand	A-So	Little Rock
Gay, Earl V.	T	Pottsville
Gee, Stayton	E-So	Ravenden
George, Louise	Ed-F	Dardanelle
Gibson, John Henry	E-T	Prescott
Gilbreath, C. Richard	A-F	Fayetteville
Gill, Marie Vivian	A-F	Fayetteville
Gillespie, Mildred	A-So	Fayetteville
Gillespie, Oreta	T	Pittsburg, Texas
Gilliam, Lela Florence	Ed-So	Spiro, Okla.
Gilliam, Loyd L.	F-S	Jonesboro
Gilliam, Robert Forrest	A-F	Lockesburg
Ginacchio, John T.	A-Sp	Little Rock
Glass, George Dewey	Ed-Sp	Delaney
Glass, Miriam G.	Ag-So	Springdale
Goff, Omajean Allen	Ag-Sp	De Queen
Goodlet, Joseph P.	T	Georgetown, Tex.
Goodwin, Mathilde	A-So	El Dorado



Name	Course	Home Address
Grabiell, John Kent.	E-F	Fayetteville
Graham, Gus	A-Sp	Tuckermann
Graham, Thomas Nathan	A-Sp	Tuckermann
Graham, Ruby Estelle	Ed-Sp	Fayetteville
Graves, Homer Dodson	E-So	Springdale
Gray, Jane Mary	Ed-So	Fayetteville
Gregg, Carolyn	A-Sr	Fayetteville
Gregg, Margaret Theresa	Ag-J	Fayetteville
Gregory, Charles Adley	A-F	Fayetteville
Gregson, Dorothy	A-F	Fayetteville
Haak, Karl William	T	Texarkana
Hale, Alfred	Ag-Sp	Athens
Hall, Claris G.	A-F	Malvern
Hall, Harold Herbert	A-J	Bentonville
Hall, Marguerite	A-F	Holly Grove
Hall, Robert Norton	E-F	Eagle Mills
Hall, Willis Talbert	Ed-J	Mountain View
Ham, Franklin Earle	E-F	Prairie Grove
Hamilton, William Greene	A-J	Russellville
Hamlett, Hugh	E-F	Fayetteville
Hannah, Paul Dixon	E-Sr	Fayetteville
Hansard, Harry E.	E-F	Fayetteville
Hansard, Lela	A-Sp	Fayetteville
Hanson, Carl J.	T	Hamburg
Hardeman, Gertrude Woodson	Ed-So	Little Rock
Hardin, Leo Jefferson	A-F	Grady
Harding, Horace Hunn	E-Sr	Fayetteville
Harkey, Olga John	A-F	Ola
Harper, Harry William	A-F	Stuttgart
Harrington, Florence Almeda	Ed-So	Fayetteville
Harrington, Janette	Ed-J	Fayetteville
Harrington, Leroy J.	E-So	Fayetteville
Harris, Elmer Ralph	E-So	Trumann
Harris, Fred William	A-F	Cotton Plant
Harris, Margaret	A-J	Fayetteville
Harris, Shade Murray	E-So	Fayetteville
Harrison, Clyrene	A-Sr	Mena
Harrison, Kenneth Mulkey	Ag-So	Little Rock
Harrison, William Ringold	A-Sr	Little Rock
Hart, Gertrude Elizabeth	A-Sr	Fayetteville
Hart, Robert Paschal	E-So	Arkadelphia
Hassell, Eugene Guthrie	A-Sr	Searcy
Hawkins, Dollie Hamilton	A-Mu	Foreman
Hawn, Mary Agnes	Ed-F	Fayetteville
Hays, Hugh Ralph	E-So	Fayetteville
Hays, Orren Lee	A-So	Russellville
Head, Mary Norma	Ed-So	Texarkana
Hebert, Gaston	A-So	Hot Springs
Hedgepeth, Ann Lunette	Ed-So	Little Rock
Heerwagen, Leo	Ag-So	Fayetteville
Heerwagen, Louis Martin	Ag-F	Fayetteville
Hellums, Martha	A-So	Grady
Hembree, Raymond	Ag-Sp	Fort Smith
Henbest, Lloyd	A-F	Fayetteville
Henderson, Ethel	Ed-F	Centerton
Henderson, Norman Charles	A-F	Hot Springs
Henderson, Rebecca	Ed-F	Centerton
Hendrev, Waldersee B.	A-So	Bigelow
Hendricks, Sterling Brown	E-So	Fort Smith
Henley, Mildred	Ed-F	Fort Smith
Hensley, Clyde Van	E-F	Marshall
Henson, Louis Emerson	A-So	Springdale

Name	Course	Home Address
Heslep, Joseph, Jr.	Ag-F	Helena
Hicks, Walter Edwin	E-So	Warren
Higgs, Jere Will	E-Sr	Idabel, Okla.
Hill Earl	T	Coyle, Okla.
Hill, Hoyle	A-Sp	Augusta
Hill, Martha Jane	Ed-F	Prairie Grove
Hill, Warren D.	E-Sp	Fayetteville
Hinds, Hazel Stites	Ag-So	Fayetteville
Hinds, Hubert Bynum	Ag-Sr	Fayetteville
Hite, Tola Eugenia	Ed-F	Biggers
Hix, Gladys	A-So	Summers
Hoag, Basil Samuel	E-Sp	Fort Smith
Hodges, Cathleen McCarthy	A-Mu	Paola, Kansas
Hodges, Grayce Edith	Ag-F	Westville, Okla.
Hogan, Julian Claude	E-F	Little Rock
Holcomb, Caprice	A-F	Marble City, Okla.
Holcomb, John Edward	F-Pre-Med	Marble City, Okla.
Holderby, Richard Henry	Ag-So	Newark
Hollabaugh, Frances	Ed-F	Marshall
Hollabaugh, Shem Ernest, Jr.	E-J	Marshall
Hollabough, Mrs. Wylodean	A-Mu	Marshall
Holland, Loretta Amelia	Ed-J	Pocahontas
Holmes, Charles Troy	T	Richmond
Holmes, Mary Elmyra	Ed-Sp	Rison
Hon, Sarah	Ed-So	Hon
Holt, Coy Madison	A-Pre-Med	Rosebud
Holt, John Larkin	E-So	Harrison
Hood, Edna Lucile	A-Sr	Russellville
Hooker, Howard	T	Hot Springs
Horn, Robert Jewell	E-So	Bauxite
Howard, John McKinley	E-F	Fayetteville
Hudgins, Helen Masbern	A-So	Fayetteville
Hudson, Eva	Ed-Sp	Winslow
Huenfeld, Erna Emilie	Ag-So	Gregory
Huggins, L. Gale	E-F	Fort Smith
Hughes, Lee Harguest	Ed-Sp	Brentwood
Hughes, Lewis Hurley	E-F	Siloam Springs
Humphreys, Byron	T	Unalde, Texas
Husky, Lyman Theodore	A-F	Prescott
Hust, Hurley Gregg	A-Sp	El Paso, Texas
Hutchinson, William Ambrose	A-So	Nashville
Imon, Neil Cunliffe	E-J	Pine Bluff
Irby, Annie Clara	E-Sr	Fayetteville
Irby, Guy B.	Ed-Sr	Wesson
Irby, Patricia	Ag-Sr	Wesson
Jackson, Marshall Parks	E-So	Arkadelphia
Jacobs, Royle Wood	E-J	Fayetteville
James, Feb Ara	A-J	Walnut Ridge
James, Joe Allen	E-F	Stuttgart
Jamerson, Charles Dewey	A-Sn	Clarendon
Jamison, Joseph Dibrell	E-J	Gilliam
Jeffery, Vogel Joseph	A-F	Fort Smith
Jelks, Jefferson Rukin	Ag-Sp	McCrory
Jetton, Juliet Erin	A-J	Charleston
Joerden, Russell Howard	E-So	Pine Bluff
Johns, Vestal Gladys	A-F	Paris
Johnson, Duncan Blythe	A-So	Jonesboro
Johnson, Glenn H.	A-Sp	Harrison
Johnson, Marvin Dickson	Ag-So	Waldo
Johnson, Mary Elinor	Ed-So	Highfill
Johnson, William Albert	A-F	Lincoln
Johnston, Ray	Ag-J	Batesville

Name	Course	Home Address
Joiner, Anna Christine	A-So	Magnolia
Jones, Donald Francis	E-So	Fayetteville
Jones, Pauline de Roulhac	Ed-F	Fayetteville
Jones, Ira B.	Ag-J	Mena
Jones, Roscoe Winton	A-F	Fort Smith
Jory, Sam	E-J	Eureka Springs
Kelly, Barnie	T	Palmer, Texas
Kemp, Jarrell	A-F	Little Rock
Kennard, Mary Elizabeth Eugenia	A-Mu	Fayetteville
Kennard, Shelby W.	E-Sp	Fayetteville
Kent, Septemus Elmore	A-Sp	Hope
Kerley, Soula	T	Pocahontas
Kerr, Samuel William	E-Sp	Fayetteville
Kilbourn, Garland Rex	E-So	Bentonville
Kimbrough, Felix Albert	Ag-F	Dutch Mills
King, Cyrus Miles	E-So	Stuttgart
Kinsworthy, Annie	Ed-So	Fayetteville
Kinsworthy, Burton H.	A-J	Welton
Kirksey, Thomas Matt	A-J	Dardanelle
Kizer, Roland Cyrus	E-F	Monticello
Knerr, Dorothy Dee	A-So	Fayetteville
Knight, William Duke	A-Sp	Pine Grove
Knoch, Lester H.	E-J	Little Rock
Knotts, Pete Frank	Ed-F	Pocahontas
Knox, James Harrell	T	Cane Hill
Kozeny, Bessie Frances	A-So	Chicago, Ill.
Kroenke, Alvin Jessie	T	Fairland, Okla.
Kuhnert, Clara May	A-So	Springdale
Kuhnert, Ruth E.	Ed-F	Springdale
Kuykendall, J. Ray	E-F	Fayetteville
Kuykendall, Roy	E-F	Fayetteville
Lake, Frances Louise	A-So	Pine Bluff
Lambright, Bessie Mae	Ed-Sp	Dierks
Lasater, James	A-F	Corning
Lary, Lafayette Berger	E-F	Jonesboro
Laws, Clarence	A-Sp	Fort Smith
Lawson, Edwin Hugh	A-Sr	Nashville
Leaming, Mrs. Ione	Ag-Sp	Pine Bluff
Leach, Luther Orland	A-Sr	Scranton
Lee, Lester Otho	A-F	Center Point
Lee, William McGuire	Ag-Sr	Center Point
Leeper, Robert Fulton	E-J	Benton
Leflar, Robert Allen	A-So	Siloam Springs
Lefors, William McKinley	Ag-F	Gentry
Leighton, Syble Ingovar	A-Sp	West Helena
Leiper, Hugh Naill	A-J	Malvern
Lemay, Jack Wesley	A-Sp	Lewisville
Lemmon, Robert Waylor	A-F	Alzheimer
Leonard, Elston Stewart	A-Sp	Fayetteville
Leonard, Kathlyn Leah	Ed-F	Fayetteville
Levy, Jewell Josephine	Ed-Sr	Celina, Texas
Lewis, Geneva	A-J	Fayetteville
Lincoln, Benjamin Aplin	T	Van Buren
Lincoln, Bert Hartzell	A-So	Van Buren
Lindsey, Aleen Sanders	Ed-Sp	Jamestown
Lindsey, Frances Pierce	A-F	Portland
Lindsey, Willis Homer	Ed-Sp	Jamestown
Little, Marshall Manvil	Ed-Sp	Bauxite
Littlejohn, Jeanette	A-J	Berryville
Livesay, Douglas G.	A-Sp	Foreman
Locke, David Archibald	E-J	Fayetteville
Lockharte, Maude	Ed-So	Camden

Name	Course	Home Address
Logan, Helen	A-F	Pawnee Rock, Kan.
Lovejoy, John Francis	E-Sp	Little Rock
Lovell, Kenneth W.	A-So	Dalhart, Texas
Lovell, Ulysses Andrew	A-So	Bradford
Lyday, Edgar Purifoy	A-So	Camden
Lyon, William Alexander	A-F	Camden
Lyons, James H.	T	Montgomery, Ala.
Mabie, Russell Layton	E-F	Harrison
Machen, Hughes	E-J	Magnolia
Magruder, Cecil Lee	E-F	Fort Smith
Martin, Annlea	A-Sp	Fayetteville
Martin, Josephine	A-J	Pine Bluff
Martin, Thelma	Ed-F	Pocahontas
Mason, Arthur Dixon	A-So	Flippin
Mason, Fagan Bart	E-So	Fort Smith
Mason, Flora Pauline	Ed-Sp	Summers
Massengale, Lura Knox	Ed-Sr	Fayetteville
Massie, Lillian Emily	Ed-So	Fayetteville
Matthews, Charlie Marvin, Jr.	E-F	Lake Village
Matthews, Eula Edith	Ag-F	Sallisaw, Okla.
Matthews, Justin, Jr.	A-F	Little Rock
Matthews, Ruth Camilla	A-F	Magnolia
Maxfield, Margaret Y.	A-So	Monrovia, Calif.
Maxwell, Ralph Endicott	E-So	Siloam Springs
May, J. Ewell	A-F	Pine Bluff
McAlester, Ila	Ed-F	Fayetteville
McAdams, Claude	T	Muskogee, Okla.
McBride, Lillie Mae	A-Sr	Fort Smith
McCaleb, Jesse Burton	E-J	Batesville
McCaleb, Thomas Maxey	A-J	Williford
McCarroll, Margaret Jane	A-Sp	Little Rock
McCasland, William Stanley	E-Sp	Marshall
McConnell, Jamie Pauline	A-J	Hot Springs
McCulloch, Hugh	E-F	Elaine
McCullough, Louis Garland	Ag-Sp	Columbus, Miss.
McDaniel, Calvin Hartin	E-J	Magnolia
McDaniel, Carl Edward	E-Sp	Forrest City
McDaniel, Finios D.	E-Sp	Forrest City
McDaniel, Marcia Elizabeth	A-J	Hubbard, Texas
McDonald, Clyde Philip	A-Sr	Weldon
McDonald, Margaret	A-So	Fort Smith
McDonnell, Susie Belle	A-Sr	Little Rock
McDowell, Harry Bourne	E-F	Little Rock
McFarlane, Marguerite	A-Sp	Greenwood
McFarlin, Esther	A-F	Rogers
McGarry, Minnie Marcille	A-J	Little Rock
McGee, Borden Matthew	T	Handlev, Texas
McGill, Joseph Tate	Ag-J	Chidester
McGill, Josephine	Ed-F	Chidester
McGill, Sarah	Ed-J	Chidester
McGinty, Paul Raymond	A-F	Fort Smith
McKinnies, Henry Herman	E-F	Paragould
McMullin, Harry Logan	E-F	Marble City
McRaven, Mullins D.	A-Sp	Little Rock
McRoy, Dorothy May	A Mu	Fayetteville
Mehlburger, Max Arthur	E-F	Fort Smith
Mellor, Grace Elizabeth	A-F	El Dorado
Melton, Lon Lee	E-F	Chelsea, Okla.
Meredith, Samuel Edwin	E-F	Idabel, Okla.
Metcalf, Lettie Roberts	Ed-So	Fayetteville
Metzger, Ellen May	A-F	Morrilton
Mickel, Melba Evelyn	Ed-Sr	Van Buren

# LIST OF STUDENTS

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Name	Course	Home Address
Middlebrooks, Estelle	Ed-J	Hope
Miles, Fanning C.	A-F	Booneville
Miles, Henry Baldwin	E-F	El Dorado
Miller, Fanita W.	Ed-Sr	Huntington
Milton, Wallace M.	E-Sr	Ozark
Ming, Theodore	T	Paris
Minnis, Hal Fletcher	E-So	Roe
Mitchell, Sextus Duncan	Ed-So	Chismville
Mitchell, Shelby Hardin	A-So	Morrilton
Mitchell, William Bryan	T	Gilmer, Texas
Moffitt, Hugh Price	Ag-So	Fayetteville
Montcalm, Simeon Raul	T	Earle
Montgomery, Robert Lee	A-F	Lewisville
Moon, Charles Ray	A-F	Nashville
Moore, Delphine La Verna	Ed-F	Fayetteville
Moore, George Fred	E-So	Gurdon
Moore, Ida Mae	Ed-So	Rogers
Moore, Idus Leroy	T	Tulsa, Okla.
Moore, Stella Irene	Ed-So	Morrilton
Morehead, R. Felder	T	Hot Springs
Moose, Melbourne	A-So	Morrilton
Morris, Opal	Ed-F	Mammoth Springs
Morris, Truman Nicholas	A-So	Mammoth Springs
Morton, Alva G.	T	Enid, Okla.
Moseley, Esther Eugenia	A-Mu	Rison
Moseley, Ruth	A-Mu	Rison
Moseley, James Sidney	E-So	Little Rock
Mullins, William Eugene	A-Gr	Texarkana
Mulrennin, Bernard Cass	E-J	Fayetteville
Mulrennin, Mary Cecilia	A-So	Fayetteville
Murray, Glenn Robert	T	El Reno, Okla.
Naill, John DuBoise	A-Sp	Biscoe
Nelson, William Enloe	E-Sr	Mena
Nettleship, Wilma	A-F	Fayetteville
New, Claud	Ag-F	Marianna
Newman, Stanley M.	E-Sr	Helena
Newman, Grace	A-Sr	Little Rock
Newton, John	T	Slocomb, Ala.
Nicholls, William Edward	A-Pre-Med	Helena
Ogden, Frank, Jr.	Ag-Sp	Horatio
O'Kelley, Joseph Fred	Ag-Sr	Fayetteville
O'Kelley, Ruby Edwin	E-Pre-Med	Blue Mountain
Oliver, William Leverage	Ag-J	Corning
O'Neal, Ernest P.	E-Gr	Hope
Owsley, Kate	A-Sr	Greenwood
Paddock, Charles	A-F	Fayetteville
Paddock, Mary Grace	Ed-So	Fayetteville
Pape, William Robert	A-F	Van Buren
Park, Corinne	Ag-F	Clarendon
Park, Effie	Ed-J	Pocahontas
Park, Ora Agnes	Ed-J	Pocahontas
Parker, Chester	E-J	Chismville
Parker, Donald Ross	E-Sr	Fayetteville
Parker, Harold Robert	E-F	Fayetteville
Parker, Mary Lelia	Ed-F	Fort Smith
Parrish, Edwin Doyle	A-Sp	Mena
Paslay, Robert Cecil	A-So	Moro
Pate, Adeline	A-F	Little Rock
Patty, Charles Marion	T	Augusta
Paul, Bryan Berry	E-J	Fayetteville
Pearce, Odessa	Ag-F	Magnolia
Pearson, Charles Thomas	A-F	Fayetteville

Name	Course	Home Address
Pearson, Mabel Catherine	Ed-F	Zwolle, La.
Pearson, Velma Marie	Ed-F	Fayetteville
Pennington, Taylor	A-F	Crossett
Perdue, Arthur Monroe	A-Sp	Pine Bluff
Perdue, Gordon	A-Sr	Pine Bluff
Perry, John	T	Rogers
Pettigrew, Lucy Ervin	A-F	Charleston
Pettigrew, Mary Katherine	A-F	Fort Smith
Pettyjohn, Marvin James	Ed-F	Walnut Ridge
Petross, Lorraine	A-Sp	Springdale
Phillips, Carlos R.	E-F	Springdale
Pickel, Frank W.	A-So	Fayetteville
Pierron, Herbert Philip	E-F	Stuttgart
Poe, McDonald.	A-F	Waldron
Poe, Sam E.	Ag-F	Waldron
Polk, Joe Travis	A-J	Fayetteville
Polk, Ruby Nell	A-Mu	Fayetteville
Porterfield, Roy	Ag-F	Fayetteville
Powell, Howard S.	A-So	Little Rock
Powell, William Lee	Ag-F	Little Rock
Pryor, Vera Jane	Ed-Sp	Morrilton
Ptak, Vaclav James	A-J	Fayetteville
Pugh, Joe	Ag-So	Portland
Purifoy, Beulah Ray	A-F	Chidester
Purdy, Jacob Carmen, Jr.	E-F	Lake Providence, La.
Pycatte, Ruth	A-F	Cane Hill
Ragsdale, Thomas Floyd	E-F	Russellville
Raidt, Simon J.	T	Oklahoma City, Okla.
Ralph, Bonnell	A-Sp	Texarkana
Rambo, William Waldo	F-Pre-Med	Alston
Randall, Glenn Orvice	Ag-F	Rogers
Randleman, Dollie F.	Ag-J	Rector
Rankin, Richard Cameron	Ag-So	Jonesboro
Ratchford, Rex	E-F	Marshall
Raum, Thomas Campbell	T	Marietta, Okla.
Ray, Thelma Viola	Ag-F	Texarkana
Redman, Pierre Parker	F-Pre-Med	Joplin, Mo.
Reed, Coro Lee	Ed-So	Little Rock
Reed, Thelma	Ed-F	Little Rock
Reid, John Edward	F-Pre-Med	Little Rock
Reynolds, Johnie	A-F	Moody, Texas
Rice, Donald McConnell	E-Sr	Fayetteville
Richardson, Christine	Ed-F	Walnut Ridge
Richardson, Davis Payne	A-So	Fayetteville
Richardson, Fount	A-So	Fayetteville
Richardson, Elmer Leroy	A-F	Hardy
Richardson, Irene Lucille	Ed-F	McGehee
Riddle, James Burton	E-F	Bentonville
Rieff, Thelma Kathryn	A-F	Fayetteville
Ripley, Vincent Marsh	A-F	Fayetteville
Risley, Mary Lou	Ed-F	Cane Hill
Ritchie, Denny Mac	A-Mu	Texarkana
Ritchie, William Ludlow	A-F	Helena
Roark, Hughla	Ed-F	Neosho, Mo.
Robbins, Ruth	Ed-So	Mena
Roberts, Bessye	A-F	Mena
Roberts, Roy W.	Ag-J	Glenwood
Robertson, James Leland	A-J	Piggott
Robins, Neal Burton	E-F	Hope
Robinson, Joe	A-Sp	Lonoke
Robinson, Robert Clifton	A-So	Fayetteville
Rodgers, John Henry	Ag-F	Gravette



Name	Course	Home Address
Rodgers, Lois Virginia	A-So	Fayetteville
Roe, Madison B.	T	Calico Rock
Rogerson, John Biscoe	E-J	El Dorado
Root, Duke Martin	Ed-F	Fayetteville
Root, Harold Luther	E-F	Fayetteville
Rosenbaum, Carl Augustus	A-F	Little Rock
Rouw, Elsie Inez	Ed-F	Van Buren
Royer, Joe David	Ag-F	Jacksonville
Ruble, Maegene	Ed-F	Fayetteville
Rucker, Hugh Walter	E-So	Bauxite
Rucker, William Lawton	E-F	Bauxite
Rule, Martha	A-J	Lonoke
Ruppel, Margaret	Ed-F	Fayetteville
Rushing, Garland Stanley	Ed-F	Chidester
Russell, A. Jay	A-F	Berryville
Russell, Della Belle	A-F	Fayetteville
Russell, Mary Emily	Ed-F	Pine Bluff
Russell, Paul J.	F-Pre-Med	Joella
Rutherford, James Edgar	A-So	Malvern
Rutledge, Jim	E-F	Fayetteville
Rutledge, Mary Allen	A-F	Fayetteville
Sallee, Lyttleton	A-So	Pine Bluff
Samuelson, Grace Leonora	A-F	Brasfield
Sanderson, Lois	Ed-So	Texarkana
Savage, Vivien James	A-J	Carlisle
Scaggs, Griffin	T	Yarbro
Scarborough, William Freeman	Ag-So	DeQueen
Schoonover, William Jacob	Ed-F	Pocahontas
Scoggin, Halbert	A-Sp	Fayetteville
Sellers, Katherine Elizabeth	A-F	Morrilton
Sellers, Mrs. Jordan	Ag-Sp	Morrilton
Sellers, Mary Dale	A-Sr	Morrilton
Sealy, Mrs. Emma Lela	Ed-Sp	Fayetteville
Shandy, Doris Lucile	A-J	Pine Bluff
Shannon, Clyde	E-Sp	Grady
Sharpley, Joseph Harold	T	Sherman, Texas
Sheeks, Edgar Van Buren	A-So	Corning
Shepard, Nathaniel Leonard	E-So	Little Rock
Shinn, William Darrell	Ed-Sp	Harrison
Shipley, Elizabeth	Ed-F	Fayetteville
Shrader, Charles Warren	T	Cache, Okla.
Simpson, Augusta Louise	Ag-J	Hamburg
Simpson, Ruth	A-Mu	Hamburg
Skillern, John C.	T	Fayetteville
Slade, Milton Burke	Ag-So	El Dorado
Slaughter, Vera	Ag-F	Springdale
Slocum, Josephine	A-Sp	Bentonville
Smallwood, John Marshall	A-So	Russellville
Smatt, Neil	Ag-F	Bentonville
Smith, Ardis	E-So	Little Rock
Smith, Dale	A-Sp	Little Rock
Smith, Brice Reynolds	E-F	Wynne
Smith, Byron T.	Ag-F	Springdale
Smith, Carl William	E-So	Fayetteville
Smith, Catherine Mary	A-So	Fayetteville
Smith, Clarence Turner	Ag-So	Siloam Springs
Smith, Cyril Augustus	T	Fort Smith
Smith, Isabelle Kennibrough	A-Sr	Fayetteville
Smith, John Frank	A-J	Paris
Smith, John Ira	A-F	Tyro
Smith, Lvdle Pierson	Ag-Sr	Siloam Springs
Smith, May	A-Sr	Fayetteville

Name	Course	Home Address
Smith, Rubie Lee	Ed-F	Fayetteville
Smith, Sam Otis	A-F	Tyro
Spencer, Clara Deweese	A-Sp	Van Buren
Spikes, James Lewis	Ed-F	Pocahontas
Spikes, Lillian Vera	Ed-J	Rogers
Sprague, Bernice	Ed-F	Leachville
Spratt, Madge	Ed-So	Fort Smith
Stansberry, William Bryan	E-Sp	Little Rock
Starbird, Levi Clark	E-So	Alma
Standridge, Jacob	I	Ida, Okla.
Stephenson, Ola Diza	Ed-J	Okemah, Okla.
Stevenson, Eugene Hendrix	A-Gr	Paragould
Stinson, Rebecca	Ed-Sp	Cape Girardeau, Mo.
Stinson, Wright	T	Mt. Vernon, Texas
Stockburger, Floyd Herbert	Ag-F	Westville
Stout, Louise Emily	A-Sp	Sulphur Springs
Stout, Nona Raye	A-Sp	Sulphur Springs
Stout, Marion Lewis	A-F	Hartford
Stubblefield, Garland	A-F	Cassville, Mo.
Sugg, Alfred Roscoe	Ed-Sp	Belleville
Sullivan, Odom Farrell	Ed-So	Fayetteville
Swaffer, Carver Fuls	A-F	Marianna
Swartz, Joseph	T	Fayetteville
Tallman, Boyd L.	A-Sp	Stuttgart
Tallman, James	A-F	Stuttgart
Tarver, Vernon	F-Pre-Med	Star City
Taylor, Bernice Amber	Ed-F	Fayetteville
Taylor, Marie	A-Mu	Prairie Grove
Terry, Joseph Fleming	E-F	Fayetteville
Teter, Philip Otto	E-So	Batesville
Thain, Florence Amelia	Ag-Sp	Pine Bluff
Thayer, Rachel Corilla	A-J	Houston
Thomas, Charles Carlisle	E-F	Duluth, Minn.
Thomas, Clyde Unger	A-Sp	Berryville
Thomason, Dewey Schley	Ag-F	Warren
Thomason, Samuel Arrelion	Ag-F	Warren
Thompson, Elizabeth Florence	Ag-F	Fayetteville
Thompson, Jerome Fred	A-So	Fayetteville
Thompson, Jack Ardee	E-So	Hazen
Thompson, Mildred Katherine	Ed-J	Springdale
Thompson, Richard Haynes	A-So	Little Rock
Thrasher, Billie Bob	A-F	Prescott
Thrasher, Frances Mae	A-F	Prescott
Toaz, Mildred Elizabeth	A-F	Fayetteville
Towell, Eugenia Margaret	Ag-F	Hot Springs
Towery, Saul I.	E-So	Texarkana
Treadway, Alexander Hamilton	E-Sp	Ozark
Trimble, Mabelle Esca	A-F	Gillett
Trimble, Otis C.	Ed-So	Osage
Trimm, Blythe	A-J	Little Rock
Tuck, Delphia Elizabeth	Ed-F	Fayetteville
Turner, John Leander	Ag-Sp	Cypert
Van Arsdel, Victor Velvin	A-So	Warren
Van Frank, James Newell	E-J	Little Rock
Van Ness, Miriam	Ed-F	Eudora
Vaughn, Burton Edward	A-So	Little Rock
Velvin, Cora	Ed-F	Lewisville
Vinson, Clyde	A-Sr	Colt
Wakefield, Elmer Glenn	A-J	Nashville
Walsh, James Owens	T	Dermott
Wales, Ernest Lafayette	E-So	Mammoth Springs
Walker, Jacob Wytke, Jr.	A-F	Fayetteville

# LIST OF STUDENTS

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Name	Course	Home Address
Walker, James Barry	E-F	Dardanelle
Walker, James Oval	T	Gravelly
Walker, Olive Elmer	A-Sp	Manila, P. I.
Wallace, Louise Anna	A-Sr	Magnolia
Wallace, Albert Lester	E-Sr	Fayetteville
Wallace, George	E-F	Fayetteville
Walter, Frances Ernestine	Ed-F	Wyandotte
Walton, Homer Custer	E-F	El Dorado
Ware, Maximilian X.	E-So	Pine Bluff
Warner, Eugene Merwin	A-F	Fort Smith
Warren, Mildred	Ag-Sp	Black Rock
Waters, Helen Margery	A-So	Lake Village
Watson, David Walker	E-F	Tucker
Watts, Charlotte A.	Ed-J	Prairie Grove
Weaver, Mildred Adele	Ed-F	Heber Springs
Webb, Mabel	A-J	Fayetteville
Webb, Ralph	Ag-J	Fayetteville
Webb, Ray	Ed-J	Fayetteville
Webb, William H.	E-F	Bauxite
Wells, Willie Edna	A-F	El Dorado
Whaley, Mary Allene	A-Sp	McNeil
Whaley, Zelma Ola	Ed-Sp	McNeil
Whisler, Edith	A-Mu	Rogers
Whiteside, Leighton	T	Jumbo, Okla.
Whiteside, Thomas C.	A-So	Gentry
Wilbourne, William	A-Sp	Paragould
Wilcox, Dell Cato	E-J	Stuttgart
Wilkerson, Glaphyra	A-So	Aurora, Mo.
Wilkinson, Virginia	Ed-So	Fayetteville
Williams, Christine Marie	A-Sp	Brinkley
Williams, Freida Elizabeth	A-F	McCrory
Williams, Long John	E-J	Booneville
Williams, Lora	Ag-F	Fayetteville
Williams, Ray Edwin	A-F	Fort Smith
Williams, Zella	Ed-Sr	Scottsboro
Willoughby, Virginia	A-F	El Dorado
Wilson, Autrey Polson	A-J	Prairie Grove
Wilson, Karl F.	T	Gurdon
Wilson, Carrie Mae	Ag-J	El Dorado
Wilson, Carl V.	A-Sr	Fayetteville
Wilson, Estelle	A-F	Russellville
Wilson, Evelyn Louise	A-F	Russellville
Wilson, Frances Lucile	A-So	Fayetteville
Wilson, Katherine Neill	Ag-F	Fayetteville
Wilson, Lewis Eugene	T	Pawhuska, Okla.
Winfrey, Richard Bean	E-So	Fayetteville
Winkelman, Ben Hartwell	E-J	Fayetteville
Winters, Lois Clarke	Ed-F	Traskwood
Woldert, Dorothy Louise	Ed-F	Fort Smith
Wolfe, Ruth	A-F	Fayetteville
Wood, George Rudd	A-Sp	Van Buren
Wood, Willis Jesse	A-So	Fort Smith
Woodruff, Frances	Ed-F	Fayetteville
Woods, Mattie Bernice	A-F	Sulphur Springs
Woodruff, Elbert Newton	A-F	Fort Smith
Woodson, Juanita Delph	Ed-F	Hartford
Woodward, Farris Savoy	A-J	Ozark
Word, Orville Charles, Jr.	E-F	Fort Smith
Wright, Harry McDonald	E-So	Little Rock
Yates, Harry	T	Clyde
Yoes, Oran Campbell	A-Sp	Van Buren
York, Sam	F-Pre-Med	Fort Smith

Name	Course	Home Address
Youmans, Catherine	A-F	Fort Smith
Young, Gertrude	A-Mu	Little Rock
Young, John Henderson	E-So	Fayetteville
Zachry, Nell Steele	Ag-F	Magnolia
Zinn, Grover A.	E-F	El Dorado

# SUMMER SESSION

1919

Abbott, Thomas	Camden	Campbell, Charles M.	Russellville
Alcorn, Merritt	Rogers	Campbell, Kate	Fayetteville
Anderson, Ella	Pawhuska, Okla.	Campbell, Stanley	Fayetteville
Anderson, Cora	Stamps	Carpenter, Edna Fay	Fayetteville
Anderson, Mrs. J. C.	Springdale	Carroll, Herschell	Spring Hill
Anderson, John C.	Springdale	Carroll, Hugh A. D.	Danville
Armstrong, Dalton	Junction City	Carroll, Mamie Lou	Charleston
Arnold, Ruby	Waldo	Chandler, Florence Clyde	Fayetteville
Askew, Margaret	Fayetteville	Cheavis, Josie Estelle	Budora
Baggott, Della	Brinkley	Clark, Pearl	Goshen
Baird, Mrs. Okla	Vandale	Clifton, Mary Artie	Russellville
Baker, Cora Lee	Buckner	Cogbill, Oneida	La Grange, Tenn.
Baker, Margaret	Gueydan, La.	Coker, Alice Edith	Fayetteville
Baldwin Lonie	Waldo	Coleman, Charles R.	Little Rock
Bandeem, Mrs. J. M.	Fayetteville	Coleman, James Weatherby	Strong
Bandy, Lucy	Lockesburg	Colvert, Clyde Cornelius	Eagle Mills
Banister, Gertrude	Stuttgart	Compton, Agnes	Batesville
Barron, Gladys	Fayetteville	Cooper, Annie Jacqueline	Magnolia
Basham, Martha	Clarkesville	Cooper, Adren Earl	Hagler
Baskin, Clara L.	Wheeler	Cooper, R. A.	Biglow
Baumgartner, John	Brinkley	Cornelius, Mrs. N. V.	Van Buren
Baumgartner, Mrs. J.	Brinkley	Coventon, Bessie M.	Oakland
Bell, Bunn	Fayetteville	Coventon, Nancy Duff	Oakland
Bell, Moffitt	Fort Smith	Coventon, John William	Oakland
Bennett, Byron	Paris	Cox, Pearl Ray	Farmington
Black, Eunice	DeWitt	Craig, Clara Euzella	Wilmar
Black, Ildra G.	Fayetteville	Croom, Mally Lane	Fort Smith
Black, Mary	Fort Smith	Crowley, Mrs. Mary A. R.	Fayetteville
Blackmun, Gladys	Fayetteville	Crozier, Cornelia Newell	Fayetteville
Bland, Ella	De Valls Bluff	Crozier, Ruth Margaret	Fayetteville
Blann, Mrs. A. D.	Crawfordsville	Cunningham, Harold Estabrook	Fountain Hill
Boggan, George	Goldona, La.	Cummings, Mrs. John	Mammoth Springs
Boozier, Charles	Fayetteville	Dare, Mildred Marie	Fayetteville
Borden, Helen	Forrest City	David, Lillian Clemintine	Colt
Bouldin, Edna	Mineral Springs	David, Pearl	Colt
Bowen, Alice	Rogers	Davidson, Olive Sue	Fayetteville
Bowles, Grace	Little Rock	Davis, Mary Lou	Lowell
Bowen, Blanche	Russellville	Davis, Anna B.	Lowell
Boyd, Bernice	Fayetteville	Davis, Frances	Malvern
Brack, Winnie	Anadarka, Okla.	Davis, Jessie May	Lowell
Bradley, Vivian	Fort Smith	Dawson, Annie	Stephens
Braswell, Margaret	Fort Smith	Dawson, Florence Elizabeth	Arkadelphia
Bratton, Una Rose	Marshall	Dawson, Mariam	Stephens
Brazil, Boise E.	Bauxite	Dean, Margie	Fayetteville
Brazil, Ernest	Bauxite	DeBoer, Constance	Hardy
Brewster, Lillian	Fayetteville	Decker, Klerchis L.	Fayetteville
Brickley, Cula	Houston	Dial, Henry Franklin	Hazen
Brinton, Elsie	Bono	Dickey, Edna Mathews	Monticello
Briscoe, Eileen	Harrison	Dickinson, Juanita	Bentonville
Broach, Kathleen	Hope	Dickinson, Wilma Irene	Bentonville
Brown, Lenore	Walnut Grove	Dotson, Ethel	Fayetteville
Brown, Lucile	Dardanelle	Dotson, Katie Ella	Fayetteville
Brown, Mazillah	Walnut Grove		
Bryant, Louise	Rogers		
Bullock, Eula	Dardanelle		
Bullock, Vivian	Dardanelle		
Burns, Mary	Prescott		
Cain, Agnes	Dardanelle		
Calhoun, Alta	Booneville		

Dowell, Gladys Mamie	Fayetteville	Holt, Maude	Center Point
Duncan, Anna	Almyra	Horn, Robert	Bauxite
Duncan, Sarah Isabelle	Waldron	House, Florence	DeQueen
Earle, John B.	Fayetteville	House, John C.	Peniel, Texas
Earle, Margaret	Fayetteville	Houser, Arch C.	Mansfield
Emmerson, Mauree	Rogers	Huagins, Agatha	Lonoke
Evatt, Estella	Waldron	Hughes, Verda	Fayetteville
Falls, Sue	Vivian, Okla.	Huntley, Ruth	Little Rock
Farish, Ida J.	Springdale	Hust, Hurley	El Paso, Tex.
Fawbush, Myrtle A.	Sulphur Springs	Irby, Nolen M.	
Feaster, Sue	Princeton		Blue Mountain, Bearden
Feldman, Bertha	Van Buren	Irby, Pet	Wesson
Ferguson, James V.	Marshall	Irvin, Mary A.	Siloam Springs
Fish, Ruby	Garnett	Jackson, George	Monticello
Flynn, Gertrude	Fayetteville	Jenkins, Ella	Flippin
Fontaine, Rosalie C.	Ozan	Jenks, Caroline	Fayetteville
Foreman, James	Rose Bud	Johnson, Byron	Waldo
Fort, Pearl	Stamps	Jones, Blanche	Greenwood
Foster, Emily B.	Paris	Jones, Dorothy	Fayetteville
Frazier, Elmer	Ola	Jones, Esther	Berryville
Frazier, Mrs. Ollie M.	Ozark	Jones, Irene	Searcy
Fulcher, Joseph	Ola	Jordon, Grace	Arkadelphia
Funk, Gladys	Rogers	Jordon, Kara	Fayetteville
Furlow, Idelle	Ashdown	Kennan, Clara	Rogers
Gathright, Lucy D.	Hutig	Kennedy, Hazeltnie	Stamps
George, Mrs. Mary	Siloam Springs	Knight, Mrs. George	DeQueen
Gibson, Pauline	Nashville	Kimbrow, Mrs. Eugene	Monticello
Gilmore, Annie	Fayetteville	King, Lela P.	Ola
Glasco, Maude	Biglow	King, Anna P.	Fayetteville
Gledhill, Lois	Bentonville	Lambright, Mrs. B. G.	Dierks
Glover, Daniel	Little Rock	Lee, William	Center Point
Glover, Mrs. Daniel	Little Rock	Lincoln, Benjamin	Van Buren
Graham, Ruby W.	Fayetteville	Locke, David A.	Fayetteville
Gray, Bertha	Pfeiffer	Lockhart, Myrtle	Johnson
Green, Merle	Prairie Grove	Lucas, Henry	Fayetteville
Grubbs, Ardella	Monticello	Manning, John	Haynes
Halk, Irene	Cherry Valley	Markel, Eva	Fayetteville
Hall, Willis	Fayetteville	Martel, Glenn	Magnolia
Hames, Beulah	Paris	Martin, Fay	Rogers
Hanks, Bessie	Johnson	Mason, Byrnlce	Dermott
Hanna, Myrtle	Fayetteville	Mason, Willie	Dermott
Hardin, Virgil	McNeil	Massey, Joseph	Batesville
Hardin, Lena	Fayetteville	Massey, Walter	Warren
Harrington, Alice	Fayetteville	Matthews, Lucile	Atkins
Harris, Willie	Monticello	Mattmiller, Pearl	Stuttgart
Harrison, Mamie	Lowell	Mayfield, James L.	Silverina
Harrod, Laynie	Vilonia	Mayfield, Robert	Silverina
Hart, Gertrude	Van Buren	McAdams, Mrs. J. L.	Ashdown
Hastings, David C.	Crossett	McBride, Berta	Fayetteville
Heerwagen, Leo	Fayetteville	McBride, Lillie M.	Fort Smith
Heerwagen, Louis	Fayetteville	McCatherine, Mrs. C.	Fayetteville
Hendricks, Margaret	Fayetteville	McComic, Rosa	Nowata, Okla.
Hendricks, Sterling	Fayetteville	McCowan, Dora	Carney, Okla.
Henley, Mariam	Marshall	McDaniel, Carl	Forrest City
Henry, Rector O.	Gillham	McDonald, Jane	Helena
Hestwood, John	Sioam Springs	McDonnell, Sue	Little Rock
Hicks, Genet	Farmington	McGee, Mary A.	Ridge
Hill, Mrs. Ethel	Berryville	McHenry, Edith	Rogers
Hirst, Claude M.	Prescott	McKeen, Ruth	Bentonville
Hodnett, J. O.		McKenzie, Mrs. Ury	Texarkana
Hogan, Julian	Conway	McKinney, Lucile	Cherry Valley
Holcombe, Edgar N.	Magness	McLaughlin, John	Sulphur Springs
Holmes, Corinne	Camden	McLees, Willie	Little Rock
		McNeill, Faye	Bauxite



McLeod, Walter		Rhodes, Irma	Wilmar
McRoy, Dorothy		Rice, Ethel	Bentonville
McWorkman, Marie	Fayetteville	Richardson, Irene L.	McGehee
McWhorter, Josie	Gentry	Richmond, Ida B.	Atkins
Means, Annie	Bentonville	Ripley, Vincent	Fayetteville
Mickel, Melba	Spring Valley	Risley, Mary L.	Canehill
Melton, Lottie	Van Buren	Ritchie, Frances	Camden
Miller, Alma	Cabot	Ritter, Cora L.	Jonesboro
Miller, Fanita	Harris	Roberts, Ida	Monticello
Miller, Katherine	Huntington	Roberts, Naomi	Trenton
Milligan, Lucile	Malvern	Robertson, Mrs. E. C.	Selma
Mitchell, Jewell	Fayetteville	Robertson, Euell C.	Selma
Mitchell, Winnie	Stamps	Robinson, Annie M.	DeWitt
Moore, Henrietta	Carrollton	Robinson, Fannie	St. Paul
Moore, Nannie	Fayetteville	Robinson, Nora	West Fork
Moore, Lena	Fayetteville	Rodgers, Eunice	Fayetteville
Morris, Etna	Lewisville	Rogers, Blanche	Bauxite
Morrow, Mrs. Minnie	Fort Smith	Rollins, Harold	Fayetteville
Mowery, Viola	Fayetteville	Reed, Marjorie	Magnolia
Murray, Jean	Fort Smith	Russell, Festus	Imboden
Murray, Paul	Malvern	Russell, Jean	Pine Bluff
Nash, Cora	Bearden	Sanderson, Maurine	Texarkana
Nelson, Charlie E.	Huttig	Sanderson, Sibyl	Texarkana
Nelson, Clarence	Nashville	Sanford, Newport	Peniel
Nelson, Edward	Crenshaw, Miss.	Schnelle, Mrs. A. N.	Corpus Christi, Tex.
Newman, Grace	Sprig, Okla.	Seoggin, Arthur	Fayetteville
Nichols, Mary E.	Little Rock	Sedwick, Bessie	Gentry
Nesbitt, James	Gillett	Severance, Alberta M.	Harrison
Nixon, Fannie	Jonesboro	Shen, William D.	Springdale
Nobles, Rosa	Ratliff	Smith, Abbie N.	Fayetteville
Northcutt, Frances	Star City	Smith, Mrs. Abraham J.	Fayetteville
O'Connor, Earle	Paris	Smith, Abraham J.	Fayetteville
Orton, Mrs. C. A.	Fayetteville	Smith, Euna	Garnett
Owen, Loyce	Ashdown	Smith, M. Evangeline	Fayetteville
Pace, Leah	Luxora	Smith, Rubie L.	Bentonville
Palm, Clara	Fayetteville	Spencer, Luna	Cherry Valley
Park, Edna	Rogers	Stefford, Minnie	Forrest City
Park, Ora	Pocahontas	Stevens, Mrs. Otis	Cave Springs
Parley, Grace	Pocahontas	Stewart, Jessie	Camden
Parley, Daisy	Summers	Stinson, Laura	Springdale
Patterson, Allene	Summers	Stypes, Amye	Little Rock
Patterson, Mrs. K. F.	Oklahoma City, Okla.	Stoddard, Jane	Waldron
Pearson, Arch	El Dorado	Stone, Martha	England
Pertgenow, Georgia	Fayetteville	Stone, Mildred	England
Phelan, Florence	West Fork	Stone, Willie	Johnson
Phibbs, Mrs. R. E.	Pine Bluff	Stuckey, Helen	Johnson
Pike, Lee T.	Fayetteville	Stuckey, Willie	McNeil
Parker, Lettie	Fordyce	Sullivan, Mary B.	Fayetteville
Parker, Leta	Fayetteville	Swaggerty, Letha	Fort Smith
Parker, Blanche	England	Taggart, Helen	Berryville
Parr, James	Alexandria, La.	Taylor, Elsie	Corning
Powell, Lila	Wyman	Taylor, Beloit	Cave Springs
Powers, Archibald	Columbus	Terhune, Mrs. Alice	Farmington
Parker, Edward	Siloam Springs	Terhune, Reaves	Pine Bluff
Parker, Luther	Dermott	Tham, Edna	Camden
Parker, Elveng	Prairie Grove	Theriot, Lalla	Fayetteville
Parr, Ruth	Canehill	Thomber, Earl	Fayetteville
Parker, William	Alston	Tuck, Delpha	Little Rock
Rankin, Edna	Mena	Tucker, Frances	Gentry
Reed, Arizona	Springdale	Tygart, Mary	Camden
Reed, Lela M.	Stuttgart	Tyson, Harvey	Carney, Okla.
Reese, Olga	Fort Smith	Ushaw, Zillah	Little Rock
Reynolds, Mrs. Edna		Van Frank, James	

Van Ness, Miriam	Eudora	White, Carita	Fayetteville
Verfurth, Gertrude	Fort Smith	Whitmore, Ada	Center Point
Vickers, Helena	Fayetteville	Whiteside, Frederick	Monticello
Vineyard, Marion	Helena	Wilcoxon, Joanna	Hamburg
Wakefield, Elmer	Nashville	Wilfong, Mable	Fayetteville
Walker, Flossie	Johnson	Wilkey, Clovis R.	Glenwood, Ky.
Walker, Olive E.		Wilkinson, Aubrey	Palistine
	Manilla, Phil. Island	Wilkinson, Mosley	Camden
Wallace, George	Fayetteville	Williams, Hattie	Fayetteville
Walters, Patty	Rogers	Williamson, Agnes C.	Paragould
Watrous, Mildred	Wheatland, Wyo.	Williams, Naomi	Fayetteville
Watson, Cora Y.	Little Rock	Williams, Nina D.	Lowell
Watts, Charlotte A.	Prairie Grove	Williams, James F.	Atkins
Watts, Edith	Prairie Grove	Williamson, Tennie	Marmaduke
Webb, Mable	Fayetteville	Wilson, Jewell	Cabot
Webb, Ralph	Fayetteville	Wolf, Ruth	Fayetteville
Webb, Ray	Fayetteville	Wood, Thomas P.	Springdale
Wells, Edna	Fayetteville	Woodruff, Frances	Fayetteville
West, Mrs. A. W.	Galesburg, Ill.	Woody, Sue	Fayetteville

# TRAINING HIGH SCHOOL

1919-1920

Name	City	County	State
Anderson, Geneva	Fayetteville	Washington	Arkansas
Anderson, Loy	Fayetteville	Washington	Arkansas
Askew, Betty	Fayetteville	Washington	Arkansas
Bandeen, Florence	Fayetteville	Washington	Arkansas
Bandeen, France	Fayetteville	Washington	Arkansas
Bell, Mattie	Elm Springs	Benton	Arkansas
Bell, Vivian	Fayetteville	Washington	Arkansas
Blackmon, Jake	Marianna	Lee	Arkansas
Bowman, C. E.	Newport	Jackson	Arkansas
Bowman, Gus	Rommel	Jackson	Arkansas
Boyd, Audrey	Fayetteville	Washington	Arkansas
Boyd, Mary	Fayetteville	Washington	Arkansas
Brown, Guy	Fayetteville	Washington	Arkansas
Bunch, Ernest	Kingston	Madison	Arkansas
Burnip, Constance	Fayetteville	Washington	Arkansas
Campbell, Marsaline	Fayetteville	Washington	Arkansas
Cardwell, Fannie	Johnson	Washington	Arkansas
Carlson, James	Bentonville	Benton	Arkansas
Carter, Claudia	New Orleans		Louisiana
Chapman, Jim	Fayetteville	Washington	Arkansas
Combs, Otto	Fayetteville	Washington	Arkansas
Davis, Lena M.	Fayetteville	Washington	Arkansas
Dever, Olin	Fayetteville	Washington	Arkansas
Dever, Zetta	Fayetteville	Washington	Arkansas
Durham, Wm. Duncan	Conway	Faulkner	Arkansas
Dutton, Robert	Fayetteville	Washington	Arkansas
Earle, Fount	Fayetteville	Washington	Arkansas
Earle, Margaret	Fayetteville	Washington	Arkansas
Faubus, Ellis, Jr.	Aurora	Madison	Arkansas
Flanagan, Thelma	Fayetteville	Washington	Arkansas
Fullbright, Bill	Fayetteville	Washington	Arkansas
Cardner, Patsy Anne	Fayetteville	Washington	Arkansas
Garrison, Albert	St. Joe	Searcy	Arkansas
Gibbs, Guy Horton	Hamburg	Ashley	Arkansas
Gill, Melba	Fayetteville	Washington	Arkansas
Gillespie, Mary L.	Fayetteville	Washington	Arkansas
Gillett, Alline	Fayetteville	Washington	Arkansas
Gollaher, Irene	Fayetteville	Washington	Arkansas
Hale, Arthur H.	Fayetteville	Washington	Arkansas
Hall, Annie	Fayetteville	Washington	Arkansas
Hall, Mary Kate	Fayetteville	Washington	Arkansas
Hamilton, Jas. M., Jr.	Fayetteville	Washington	Arkansas
Hamlett, Aileen	Fayetteville	Washington	Arkansas
Hamlett, Marie	Fayetteville	Washington	Arkansas
Hamlett, Hugh	Fayetteville	Washington	Arkansas
Hansard, Fred	Fayetteville	Washington	Arkansas
Harding, Arthur L.	Fayetteville	Washington	Arkansas
Harding, Mary F.	Fayetteville	Washington	Arkansas
Harding, William	Fayetteville	Washington	Arkansas
Harper, Ida Lee	La Pile	Union	Arkansas
Hart, Alton	Fayetteville	Washington	Arkansas
Hawkins, John, Jr.	Foreman	Little River	Arkansas
Hawn, Marcus	Fayetteville	Washington	Arkansas
Heard, Loonie	Lono	Hot Springs	Arkansas
Henderson, Lee	Fayetteville	Washington	Arkansas

Name	City	County	State
Henley, Ben Charles	St. Joe	Searcy	Arkansas
Hester, Ralph	Evening Shade	Sharp	Arkansas
Hodges, Mary	Fayetteville	Washington	Arkansas
Hollabaugh, Frances	Marshall	Searcy	Arkansas
Hooper, Carrol	Fayetteville	Washington	Arkansas
Huddleston, Milburn	Fayetteville	Washington	Arkansas
Hudspeth, Ralph	St. Joe	Searcy	Arkansas
Hutton, Margaret M.	Fayetteville	Washington	Arkansas
Irby, Ruby	Fayetteville	Washington	Arkansas
Jackson, James	Fayetteville	Washington	Arkansas
Jamison, Edgar	Gilliam	Sevier	Arkansas
Jeffery, Gordon	Fayetteville	Washington	Arkansas
Jewell, Margaret	Fayetteville	Washington	Arkansas
Johnson, Ben F.	Fayetteville	Washington	Arkansas
Johnson, Bonnie	Fayetteville	Washington	Arkansas
Johnson, Lima	Hatfield	Polk	Arkansas
Jones, E. Hugh	Valley Springs	Boone	Arkansas
Jones, Margaret	Fayetteville	Washington	Arkansas
Kent, Elmore	Hope	Hemstead	Arkansas
Ladd, Jimmie	Fayetteville	Washington	Arkansas
Ladd, Virginia	Fayetteville	Washington	Arkansas
Latimer, Elizabeth	Fayetteville	Washington	Arkansas
Latimer, Dorothy	Fayetteville	Washington	Arkansas
Lea, King	Fayetteville	Washington	Arkansas
Ledgerwood, Violet	Paris	Logan	Arkansas
Lewis, Gus	Fayetteville	Washington	Arkansas
Liebolt, Frederick	Fayetteville	Washington	Arkansas
Lighton, Peggy Sue	Fayetteville	Washington	Arkansas
Linder, John	Little Rock	Pulaski	Arkansas
Lively, Gladys	Springdale	Washington	Arkansas
Lively, Grayce	Springdale	Washington	Arkansas
Lucas, Ruth	Fayetteville	Washington	Arkansas
Manaffey, Grace	Fayetteville	Washington	Arkansas
Majors, Jewel T.	Gurdon	Clark	Arkansas
Mayer, Carl	Wyandotte	Ottawa	Oklahoma
Mayes, Evelyn	Fayetteville	Washington	Arkansas
Mock, Blanche	Fayetteville	Washington	Arkansas
Moore, Jerome	Fayetteville	Washington	Arkansas
Moffit, Annie	Fayetteville	Washington	Arkansas
McCastlain, Maurice	Holly Grove	Monroe	Arkansas
McCatherine, Maxine	Fayetteville	Washington	Arkansas
McCatherine, Thelma	Fayetteville	Washington	Arkansas
McKenna, Ella Bell	Poteau	Leflore	Oklahoma
McNabb, Helen	Fayetteville	Washington	Arkansas
McNabb, Helen	Fayetteville	Washington	Arkansas
McNabb, Horace	Fayetteville	Washington	Arkansas
McNabb, Ruth	Fayetteville	Randolph	Arkansas
McNairy, Evelyn	Pocahontas	Ouachita	Arkansas
Murry, Paul	Bearden	Washington	Arkansas
Oakley, Ferdinand	Fayetteville	Washington	Arkansas
O'Connor, Earle	Fayetteville	Washington	Arkansas
Paddock, Charles	Fayetteville	Washington	Arkansas
Parker, Frances	Fayetteville	Washington	Arkansas
Pattilo, Jean	Nash	Bowie	Texas
Parsley, Joyce	Fayetteville	Washington	Arkansas
Pearson, Dane	Fayetteville	Washington	Arkansas
Pearson, Holace	Fayetteville	Washington	Arkansas
Pettigrew, Georgia	Fayetteville	Washington	Arkansas
Phillips, Julia	Fayetteville	Washington	Arkansas
Pond, Jewell Cate	Fayetteville	Washington	Arkansas
Pugh, Bernice	Fayetteville	Washington	Arkansas

Name	City	County	State
Pugh, Wilkes	Fayetteville	Washington	Arkansas
Reinhardt, Emma G.	Des Arc	Prairie	Arkansas
Renner, Maurice	Fayetteville	Washington	Arkansas
Renner, Welton	Fayetteville	Washington	Arkansas
Roberts, Byron	Fayetteville	Washington	Arkansas
Robertson, Willie Sue	Fayetteville	Washington	Arkansas
Rollans, Harold	Prairie Grove	Washington	Arkansas
Rudolph, Marguerite	Fayetteville	Washington	Arkansas
Rudolph, Winifred	Fayetteville	Washington	Arkansas
Russell, Sam	Cass	Franklin	Arkansas
Sharp, Miles	Alma	Crawford	Arkansas
Sharp, Linn	Fayetteville	Washington	Arkansas
Shearer, William	Lincoln	Washington	Arkansas
Shipley, Edgar	Fayetteville	Washington	Arkansas
Shipley, Hazel	Fayetteville	Washington	Arkansas
Smith, Mary Emma	Fayetteville	Washington	Arkansas
Smith, Mack	Fayetteville	Washington	Arkansas
Stephenson, Jack	Okemah	Okfuskee	Oklahoma
Stephenson, Euda	Okemah	Okfuskee	Oklahoma
Stone, Edward	Fayetteville	Washington	Arkansas
Stout, Rhue	Fayetteville	Washington	Arkansas
Teeter, Glenn	Pottsville	Pope	Arkansas
Thompson, Jerome C.	Fayetteville	Washington	Arkansas
Toaz, Greta	Fayetteville	Washington	Arkansas
Toaz, Lillian	Fayetteville	Washington	Arkansas
Ward, John	Fayetteville	Washington	Arkansas
Ward, Rachel	Fayetteville	Washington	Arkansas
Weir, Opal	Fayetteville	Washington	Arkansas
White, Tom	Fayetteville	Washington	Arkansas
Williams, Virginia	Fayetteville	Washington	Arkansas
Williams, Vernon	Mount Ida	Montgomery	Arkansas
Williams, Virgil	Mount Ida	Montgomery	Arkansas
Winkelman, Charlie	Fayetteville	Washington	Arkansas
Winn, Isa	West Fork	Washington	Arkansas
Wolf, George	Fayetteville	Washington	Arkansas
Wright, Willis	Fayetteville	Washington	Arkansas
Wyatt, Maud	Fayetteville	Washington	Arkansas

# SUMMARY

<i>College of Arts and Sciences:</i>		355
Graduates	3	
Seniors	29	
Juniors	42	
Sophomores	66	
Freshmen	120	
Specials	57	
Music	23	
Pre-Medicals	15	
<i>College of Education:</i>		190
Graduates	0	
Seniors	15	
Juniors	20	
Sophomores	52	
Freshmen	78	
Specials	25	
<i>College of Engineering:</i>		237
Graduates	1	
Seniors	13	
Juniors	23	
Sophomores	45	
Freshmen	66	
Specials	20	
Trade Courses	69	
<i>College of Agriculture:</i>		98
Graduates	0	
Seniors	11	
Juniors	11	
Sophomores	19	
Freshmen	34	
Specials	23	
	Total	880
	Duplications	29
Fall, Winter and Spring Terms		851
Summer Session		400
Training High School		152
Agricultural Short Course		13
	Total	1416
Students registered for General Extension Courses		140
	Total	1556



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